Manual

AUTOMATION

WAGO-Software

WAGO DALI Configurator

for the configuration of the DALI network and the DALI Multi-Master Module 753-647

Version 2.0.0

WAGO®

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Every conceivable measure has been taken to ensure the accuracy and completeness of this documentation. However, as errors can never be fully excluded, we always appreciate any information or suggestions for improving the documentation.

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We wish to point out that the software and hardware terms as well as the trademarks of companies used and/or mentioned in the present manual are generally protected by trademark or patent.

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1 Notes about this Documentation

Note

Keep this documentation!
The operating instructions are part of the product and shall be kept for the entire lifetime of the device. They shall be transferred to each subsequent owner or user of the device. Care must also be taken to ensure that any supplement to these instructions are included, if applicable.

1.1 Scope

This documentation applies for the WAGO DALI Configurator in conjunction with the DALI Multi Master Module 753-647.

1.2 Copyright

This Manual, including all figures and illustrations, is copyright-protected. Any further use of this Manual by third parties that violate pertinent copyright provisions is prohibited. Reproduction, translation, electronic and phototechnical filing/archiving (e.g., photocopying) as well as any amendments require the written consent of WAGO Kontakttechnik GmbH & Co. KG, Minden, Germany. Non-observance will involve the right to assert damage claims.

1.3 Symbols

⚠ DANGER

Personal Injury!
Indicates a high-risk, imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ DANGER

Personal Injury Caused by Electric Current!
Indicates a high-risk, imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

Personal Injury!
Indicates a moderate-risk, potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

Personal Injury!
Indicates a low-risk, potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE

Damage to Property!
Indicates a potentially hazardous situation which, if not avoided, may result in damage to property.

NOTICE

Damage to Property Caused by Electrostatic Discharge (ESD)!
Indicates a potentially hazardous situation which, if not avoided, may result in damage to property.

Note

Important Note!
Indicates a potential malfunction which, if not avoided, however, will not result in damage to property.

Information

Additional Information:
Refers to additional information which is not an integral part of this documentation (e.g., the Internet).

1.4 Number Notation

Table 1: Number notation

Number code	Example	Note
Decimal	100	Normal notation
Hexadecimal	0x64	C notation
Binary	'100' '0110.0100'	In quotation marks, nibble separated with dots (.)

1.5 Font Conventions

Table 2: Font conventions

Font type	Indicates
italic	Names of paths and data files are marked in italic-type. e.g.: *C:\Programme\WAGO-I/O-CHECK*
Menu	Menu items are marked in bold letters. e.g.: **Save**
>	A greater-than sign between two names means the selection of a menu item from a menu. e.g.: **File** > **New**
Input	Designation of input or optional fields are marked in bold letters, e.g.: **Start of measurement range**
“Value”	Input or selective values are marked in inverted commas. e.g.: Enter the value “4 mA” under **Start of measurement range**.
[Button]	Pushbuttons in dialog boxes are marked with bold letters in square brackets. e.g.: **[Input]**
[Key]	Keys are marked with bold letters in square brackets. e.g.: **[F5]**

2 Important Notes

This section describes the legal principles and system requirements for using the software in compliance with intended purpose, underlying provisions and stated specifications.

2.1 Legal Bases

2.1.1 Subject to Changes

WAGO Kontakttechnik GmbH & Co. KG reserves the right to provide for any alterations or modifications that serve to increase the efficiency of technical progress. WAGO Kontakttechnik GmbH & Co. KG owns all rights arising from the granting of patents or from the legal protection of utility patents. Third-party products are always mentioned without any reference to patent rights. Thus, the existence of such rights cannot be excluded.

2.1.2 Personnel Qualification

Any steps related to the use of WAGO software may only be performed by qualified employees with sufficient knowledge of handling the respective PC system used.

Steps in which files are created or changed on the PC system may only be performed by qualified employees with sufficient knowledge in the administration of the PC system used in addition to the aforementioned.

Steps in which the behavior of the PC system in a network is changed may only be performed by qualified employees with sufficient knowledge in the administration of the network used in addition to the aforementioned.

2.2 Safety Advice (Precautions)

Note

Use up-to-date security software!
Secure operation of the PC system can be at risk as a result of malware such a viruses and Trojans, as well as related threats such as denial-of-service attacks. Therefore, make sure that the latest security software and definitions are always installed on the PC system.

Note

Disable or uninstall software that is no longer required!
The vulnerability of a PC system against malware and related threats increases with the number of installed or active software components (applications and services). Therefore, uninstall or disable software components that are not needed for the purpose at hand.

2.3 Requirements

2.3.1 PC Hardware

Table 3: Requirements PC Hardware

Component	Requirements
Operating system	Windows XP (SP3)/Windows 7/ Windows 8
Random access memory (RAM)	Min. 512 MB
Free hard disk storage unit	Min. 20 MB for the WAGO DALI Configurator and 610 MB for the .NET 4.0 Framework
Processor	Min. 1 GHz
Other	Installed network card, .NET 4.0 Framework (Redistributables are provided), standard web browser with Java support

2.3.2 PC Software

Table 4: Required PC Software

Component	Reference source (order number)
WAGO-I/O-*PRO*	WAGO (759-333)
.NET Framework 4.0	Microsoft (free download under: www.microsoft.com)
WAGO DALI Configurator from Version 2.0	WAGO Stand Alone Tool, download under: www.wago.com

Table 5: Optional PC Software

Component	Reference source (order number)
WAGO-I/O-*CHECK*	WAGO (759-302)
WAGO Ethernet Settings	WAGO (free download at: www.wago.com)

2.3.3 WAGO-I/O-SYSTEM

Table 6: Required Hardware of the WAGO-I/O-SYSTEM

Component	Reference source (order number)
Fieldbus controller/PLC WAGO-I/O-SYSTEM 750 e. g. ETHERNET PLC 750-881	WAGO (750-881)
DALI Multi-Master Module 753-647	WAGO (753-647)
End Module 750-600	WAGO (750-600)
Current supply for the indirect supply of the DALI Bus participants via the DALI Multi-Master Module 753-647, e. g.: DC/DC Converter 753-620 or Current supply 787-1007	WAGO (753-620) WAGO (787-1007)

NOTICE

Destruction of DALI subscribers due to misuse of the WAGO power supply 787-1007!

Please note that the power supply by WAGO (Item No.: 787-1007) may only be connected to the DALI Multi-Master Module 753-647. The power supply for the DALI bus is provided indirectly via the DALI Multi-Master Module. A direction connect to the DALI bus can result in the destruction of the attached DALI slaves. Therefore, never connect the WAGO Power Supply 787-1007 to a DALI network directly without a DALI Multi-Master Module 753-647 connected between the power supply and the network.

2.3.4 Compatibility List Fieldbus Coupler/Controller

Table 7: Compatibility list, status: June 2014

Fieldbus coupler/controller	From FW version [1)]	Note
750-88x	05	
750-831	03	
750-830	04	
750-829	05	
750-849	05	Checkbox **Allow Controlmode over Ethernet** must be activated! [2)]
750-820x	02	
750-833	16	
750-333	17	
750-343	No support	
750-370	06	
750-375	All	
750-377	All	

[1)] It is generally recommended to use the latest FW version available.
[2)] WBM page “Features” > “Wago communication over Ethernet”

3 WAGO DALI Configurator

Information

Download the WAGO DALI Configurator
You can download the WAGO DALI Configurator as a stand-alone tool from the WAGO website at: http://www.wago.com.

The WAGO DALI Configurator allows easy commissioning of a DALI network via DALI Multi-Master Module 753-647.

The WAGO DALI Configurator not only provides functions for easy startup and configuration, but also for the service, care and maintenance of a DALI network.

That includes the offline configuration of the entire DALI network including the ECGs and sensors and saving and repeating device configurations, so that a replaced device can be reconstructed with database values. You can copy the device settings to another device or to several duplicates. If you are replacing an ECG, but keeping the lighting, you can write the hours of operation of the lighting to the DALI Multi-Master Module.

The network overview appears in a tree structure. All online DALI Multi-Master Modules are displayed in the Module navigation. The tree structure shows the DALI network of the DALI Multi-Master Module currently selected. Multiple selection of devices ensures an efficient configuration.

Note

Logging operating hours with firmware version 04 or later!
The “Logging of operating hours” function is integrated in firmware version 04 and later.
This function is disabled for DALI Multi-Master Modules with older firmware versions.

3.1 Overview of Important Functions

- Addressing of the DALI bus subscribers
- Scenes and group formation
- Control gear configuration (ECG)
- Sensor configuration
- I/O module-specific settings
- Diagnostic function
- Import and export function
- Status messages from defective ECGs/lamps
- Manually connect/disconnect
- Signaling a communication interruption
- Displaying, resetting and logging*) operating hours

*) for DALI Multi-Master Modules firmware version 04 or higher

3.2 Installation

The WAGO DALI Configurator can be installed as part of the WAGO-I/O-*CHECK* software (Item No.: 759-302) version 3.5.1.1 or higher to launch it directly from WAGO I/O-*CHECK*.

The WAGO DALI Configurator is also easy to install as a stand-alone tool from a “Setup.exe” file with user-guided wizards.

3.3 Launching the WAGO DALI Configurator

Note

WAGO-I/O-*CHECK*
If available, you can launch the WAGO DALI Configurator from the WAGO-I/O-*CHECK* startup tool (version 3.5.1.1 or higher)!
The WAGO-I/O-*CHECK* startup software is available under Item No. 759-302 on a CD-ROM.

The requirements for online configuration described in the following sections include:

- The hardware configuration of your fieldbus node is correct.
- The DALI networks is installed without errors and is wired.
- The WAGO DALI Configurator software (as a stand-alone tool or as part of the WAGO-I/O-*CHECK* software) is available on your PC.

3.3.1 Launching from WAGO-I/O-*CHECK*

To launch the software from WAGO-I/O-*CHECK* directly, the program must also be available on the PC.

1. Read the hardware configuration of your fieldbus node from the WAGO-I/O-*CHECK* startup tool.

2. Right-click the icon for the DALI Multi-Master Module.

3. In the context menu, select the **Settings** menu item (see the figure below). The WAGO DALI Configurator opens.

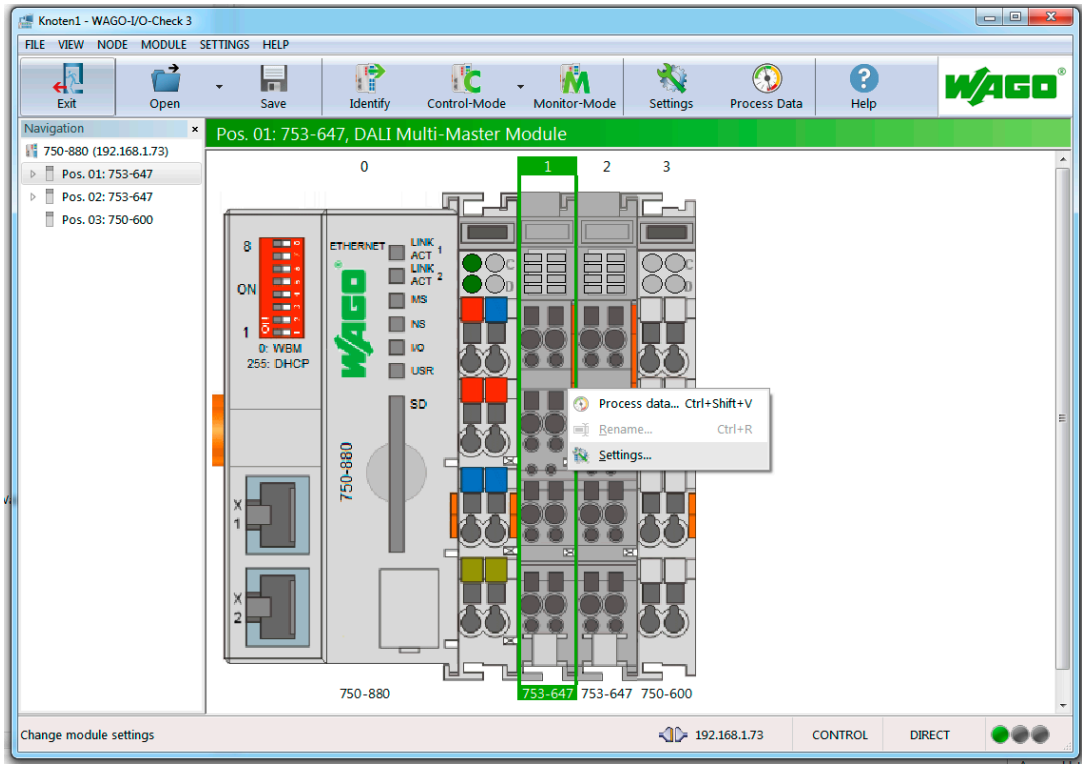


Figure 1: Launching the WAGO DALI Configurators from WAGO-I/O-*CHECK*

3.3.2 Launching as a Stand-Alone Tool

1. Launch the WAGO DALI Configurator by double-clicking the .exe file. The WAGO DALI Configurator opens. The "**START**" tab is open by default.

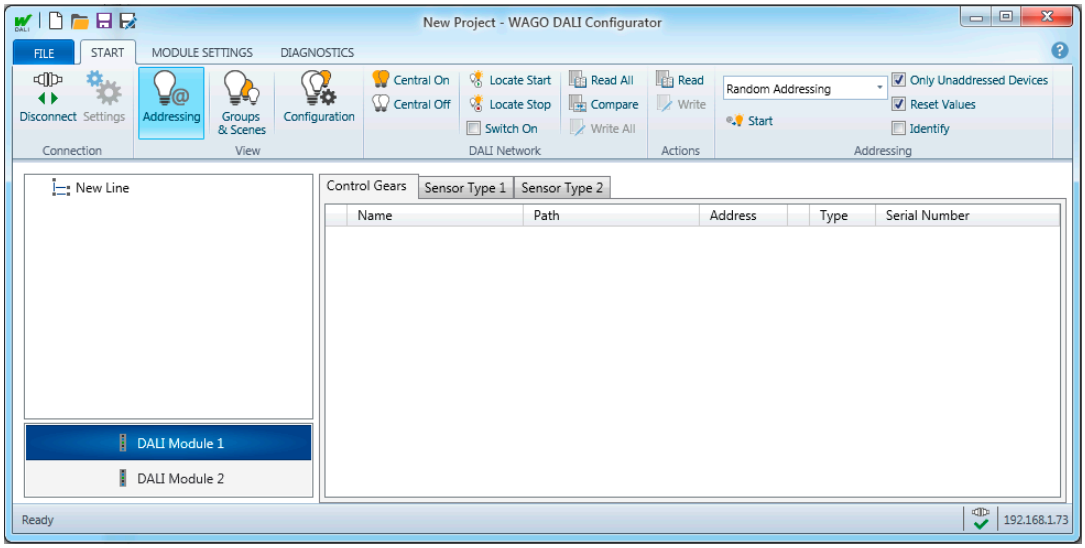


Figure 2: Launching the WAGO DALI Configurator by clicking the .exe file

The user interface, its functions and views are described in the next sections.

4 User Interface

The user interface is divided into seven areas:

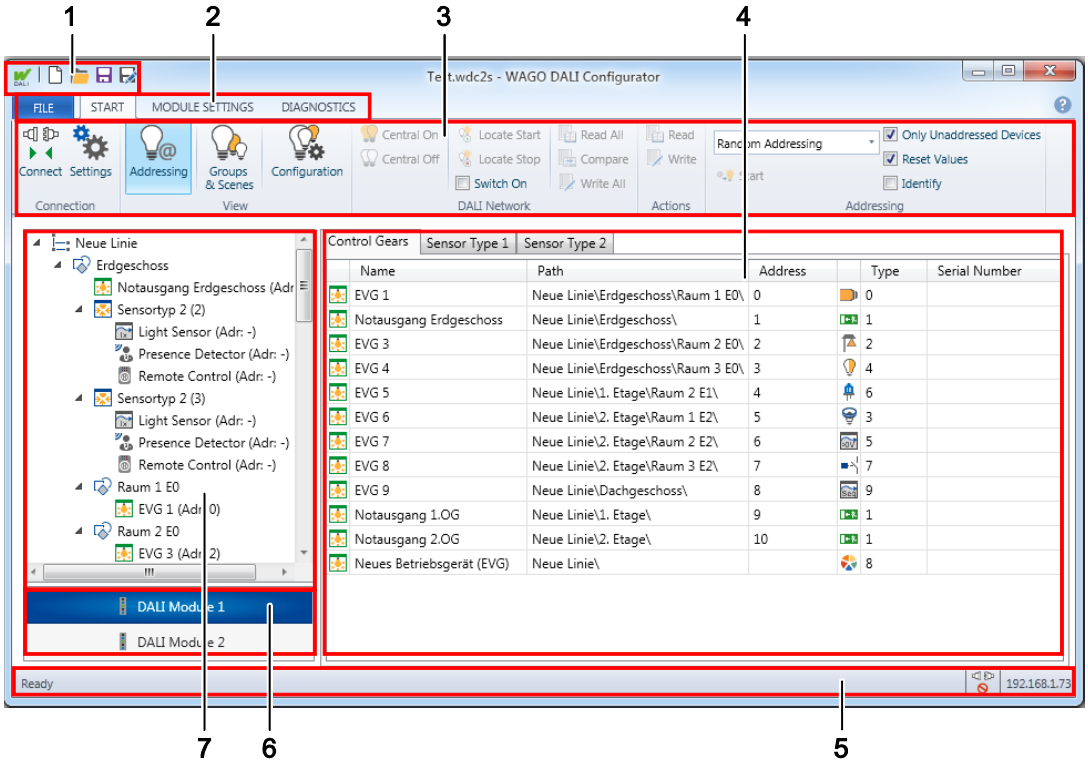


Figure 3: User interface

Table 8: Legend for the “User interface” figure

Pos.	Explanation
1	Toolbar for quick access
2	Tabs
3	Ribbon with contextual buttons, selection boxes and checkboxes
4	Contextual configuration area
5	Status bar
6	Module navigation: Selection of the current DALI Multi-Master Modules
7	Tree structure

There are four tabs. There are some views of the user interface on the tabs.

- FILE
- START
- MODULE SETTINGS
- DIAGNOSTICS

Each tab has its own ribbon with buttons, selection boxes and/or checkboxes that are described in more detail in the following sections.

4.1 “START” Tab

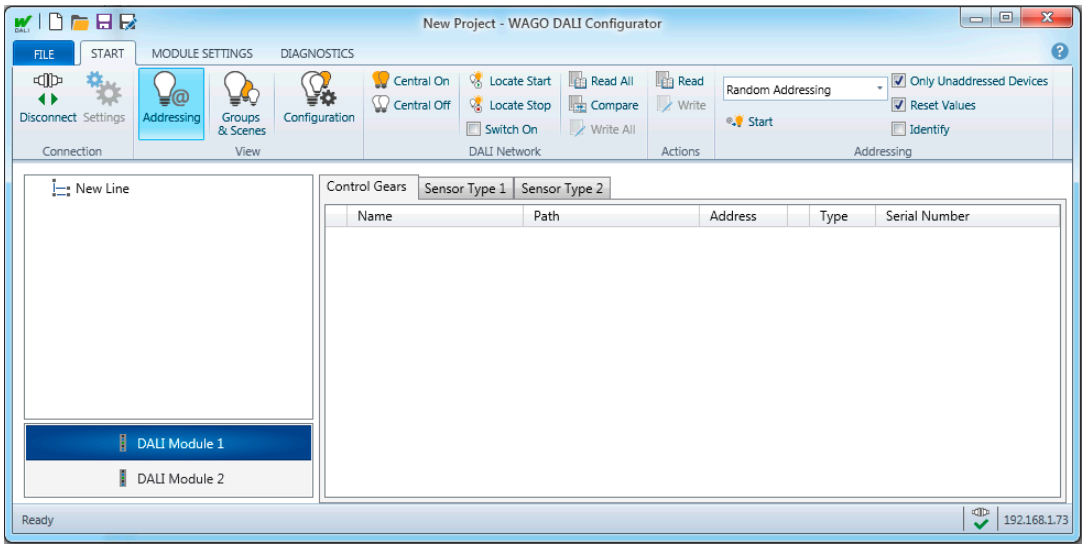


Figure 4: View of the “START” tab

On the “**START**” tab, the ribbon is horizontal below the tab.
The buttons, selection boxes and checkboxes on the ribbon are depend on context in part.

Table 9: Buttons of the “START” tab – Connection

Button	Label	Description
Connection		
	[Connect]	(only visible if not connected) Establishes the connection to the DALI Multi-Master Module.
	[Disconnect]	(only visible if connected) Disables the connection to the DALI Multi-Master Module.
	[Settings]	Click this button to open the “Communication Settings” dialog, see section “Communication Settings”.

You can work with three main views:
- Addressing
- Groups & Scenes
- Configuration

Click the respective buttons on the ribbon to switch between views.

Table 10: Buttons of the “START” tab – View

Button	Label	Description
View		
	[Addressing]	Click this button to switch to the view for addressing, see section “Addressing”.
	[Groups & Scenes]	Click this button to switch to the view for assigning the devices in groups and scenes, see section “Groups & Scenes”.
	[Configuration]	Click this button to switch to the view for configuring the devices, see section “Configuration”.

Table 11: Buttons of the “START” tab – DALI Network

Button	Label	Description	
DALI Network			
	[Central On]	Click this button to switch ON all lights connected to the DALI line.	
	[Central Off]	Click this button to switch OFF all lights connected to the DALI line.	
	[Locate Start]	Click this button to start the localization function for one or more selected DALI control gears for identifying and if necessary, checking the physical installation location.	
	[Locate Stop]	Click this button to stop the localization function.	
☑ / ☐*	**Switch On**	☑	A steady light is used for the localization function of ECGs.
		☐	A flashing light is used for the localization function of ECGs.

Table 11: Buttons of the “START” tab – DALI Network

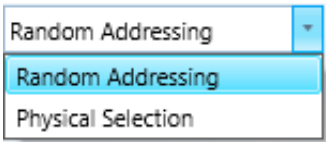
Button	Label	Description
	[Read All]	Click this button to read addresses, group and scene information and configuration parameters of all connected DALI network devices.
	[Compare]	Click this button to compare a configuration (offline) with another configuration available in the DALI network (online).
	[Write All]	Click this button to write all data to the DALI network devices available online.

* Default

Table 12: Buttons of the “START” tab– Actions

Button	Label	Description
	Actions	
	[Read]	Contextual: • In the Addressing view: Addressed devices are searched (depending on the selected tab) • In the Groups & Scenes view: Group and scene settings are read. • In the Configuration view: The device parameters selected in the topology tree are read (depending on the selected tab)
	[Write]	Contextual: • In the Addressing view: Disabled • In the Groups & Scenes view: Group and scene settings are written • In the Configuration view: The device parameters of the selected device(s) are written

Table 13: Buttons of the “START” tab – Addressing

Button	Label	Description	
Addressing			
		Choose between: • “Random addressing” (The DALI network device should be assigned a random address.) • “Physical addressing” (The DALI network device is identified and subsequently addressed, e.g., by the push of a button or by unscrewing and-again screwing in the lighting.)	
	[Start]	Click this button to launch the addressing operation for the tab currently selected (control gears, sensor type 1 or sensor type 2).	
☑* / ☐	**Only Unaddressed Devices**	☑	Only devices without a short address will be addressed.*
		☐	All devices are readdressed.
☑* / ☐	**Reset Values**	☑	The devices are reset to their reset values.*
		☐	The devices are not reset to their reset values.*
☑ / ☐*	**Identify**	☑	Each readdressed device is identified by the address assignment.
		☐	No identification is made while addressing.*

* Default

4.1.1 Communication Settings

To set the communication parameters for the link between the DALI Configurator and WAGO fieldbus controller, click the **[Settings]** button on the ribbon. The “Communication Settings” dialog appears

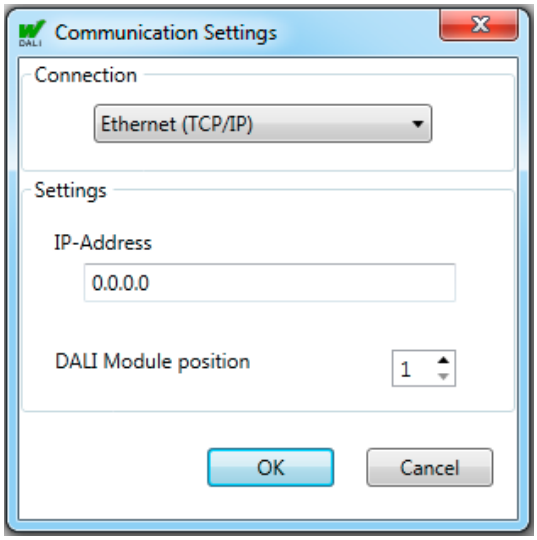


Figure 5: “Communication Settings” dialog

In this dialog, you can choose the connection type in the **Connection** selection box:

- ETHERNET
- Serial connection

In the **Settings** area, you can do the following based on the selection made:

- Enter an IP address in the **IP Address** input field.
- Select the associated COM port in the **Port** selection box.

Select or enter the required number in the **DALI Module position** selection box. Click the **[OK]** button to confirm your entries.

4.1.2 Addressing

To set the tree structure for the network topology, to add DALI network devices, to assign device labels and to address all DALI network devices, click the **[Addressing]** button.

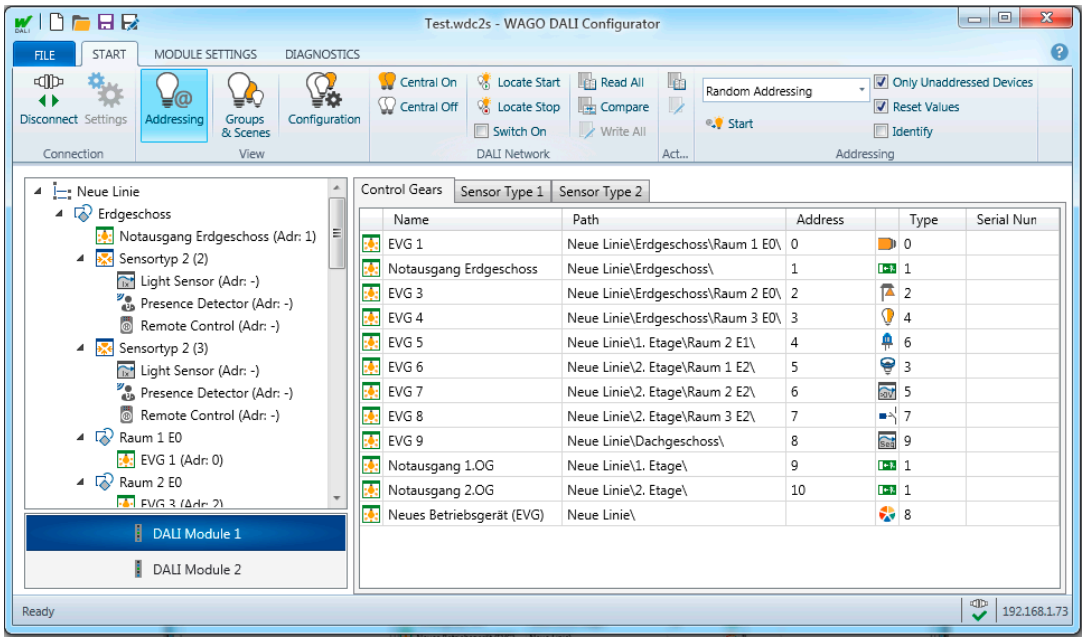


Figure 6: “Addressing”, “Control Gears” view (example)

Im Konfigurationsbereich stehen Ihnen nun 3 weitere Registerkarten zur Verfügung, unter denen Sie Ihrem Netzwerk verschiedene DALI-Netzwerkteilnehmer hinzuzufügen können:

Figure 7: Tabs in the “Addressing” view

- Control Gears (ECGs)
- Sensor Type 1 (pushbutton couplers and multi-sensors)
- Sensor Type 2 (pushbutton couplers and multi-sensors)

Note

Distinction between sensor types 1 and 2
The distinction of sensor types is new in this version of the WAGO DALI Configurator.

Sensor Type 1 includes:

- WAGO DALI Multi-Sensor Kit 2851-8201
- WAGO DALI Sensor Coupler 2851-8202
- Sensor Adapter OSRAM DALI PROFESSIONAL,

combinable with:
- Sensor OSRAM DALI HIGHBAY
- Sensor OSRAM DALI VISION

- Pushbutton coupler OSRAM DALI PRO PB Coupler
- Light installation sensor OSRAM DALI LS/PD LI
- Radar sensor OSRAM DALI Professional Sensor Coupler HF LS LI

Sensor Type 2 includes:
- WAGO DALI MSensor-02 5DPI 41rc (ceiling installation) 2851-8301
- WAGO DALI MSensor-02 5DPI 41w (socket installation) 2851-8302
- WAGO DALI MSensor-02 5DPI 41rs (surface mount) 2851-8303
- Pushbutton coupler TRIDONIC DALI XC

The following table provides an overview of the network devices that can be added:

Table 14: List of available DALI network devices

Icon	Function	Icon/type		Label
	Control Gear (ECG)		0	Standard ECG
			1	Separate emergency lighting
			2	Discharge lamp
			3	Low voltage halogen lamp
			4	Filament lamp
			5	Converting the digital signal into a DC voltage
			6	LED lamp
			7	Switching function
			8	Color control device
			9	Sequencer
			250	*Error message: Duplicate address or undefined response.*[*]
		[List of all recognized gear types]	255	*Several gear types are supported.*
	Sensor type 1: Light sensor			MSensor – Brightness sensor function
	Sensor type 1: Presence detector			MSensor – Presence detection function
	Sensor type 1: Push button			Push button
	Sensor type 1: Error message	[+ Gear type]		*Error message: Duplicate address or undefined response.*[*]
	Sensor type 2: Light sensor			MSensor – Brightness sensor function
	Sensor type 2: Presence detector			MSensor – Presence detection function
	Sensor type 2: Remote control			MSensor – Remote control
	Sensor type 2: Button			Button

Table 14: List of available DALI network devices

Icon	Function	Icon/type	Label
	Sensor type 2: Error message	[+ Gear type]	*Error message: Duplicate address or undefined response.*[*]

[*] Procedure for resolving duplicate addresses: See section “DIAGNOSTICS Tab”.

4.1.2.1 Control Gears (ECG)

4.1.2.1.1 Start Addressing

Note

Addressing involves current tab!
Addressing is always only carried out for the devices of the tab currently selected (Control Gears, Sensor Type 1, Sensor Type 2) and not for all gear types at the same time.

1. To start addressing, first establish the connection to the DALI Multi-Master Module by clicking the **[Connect]** button.
2. In the selection box, choose between the “Random addressing” and “Physical addressing” entries.
3. Click the **[Start]** button.
4. Click **[Yes]** to confirm the dialog.

The detected ECGs are listed under the “**Control Gears**” tab.
The **tree structure** can be expanded on the left side of the configuration area. It also contains a list of detected ECGs.

4.1.2.1.2 Add

In the case of an offline configuration, the required ECGs can also be created manually from the context menu:

1. To assign an ECG to a DALI Multi-Master Module, first select the “**Control Gears**” tab.
2. Right-click in the configuration area under the “**Control Gears**” tab to display the context menu.
3. In the context menu, select **Add Control Gear**. A dialog appears:

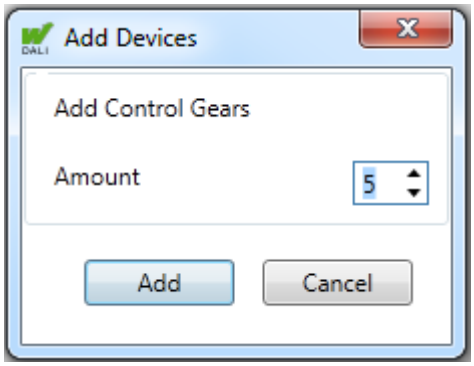


Figure 8: “Add Devices” dialog

4. Enter the required number of ECGs in the selection box and click the **[Add]** button to confirm your entry.

The ECGs created are now listed in the table under the “**Control Gears**” tab.

The table contains the following information:
- Name
- Path
- Address
- (Type symbol)
- Type
- Serial Number

The **tree structure** can be expanded in the topology tree on the left side of the configuration area.

5. Double-click in the respective table cell to edit the “Name”, “Address” and “Serial Number” entries.

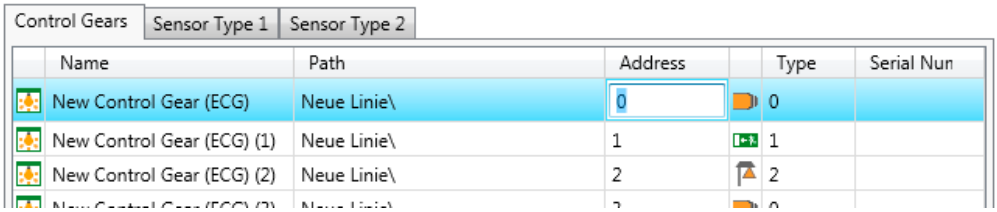


Figure 9: Editing table cells

4.1.2.1.3 Editing

Context menu
To edit the entries of the individual ECGs, right-click the required row. A context menu appears.

Note

Multiple selections are possible!
To edit several ECGs at the same time, click the required entries while holding down the **[Shift]** key. Click and hold down the **[Ctrl]** key to select and deselect specific entries.

Table 15: Context menu for the “Control Gears” list

Menu item	Description
Delete Device(s)	Use this menu item to delete the selected ECG(s) from the list.
Delete Device(s) and Address(es)	Use this menu item to delete the selected ECG(s) from the list. In addition, the short address is also cleared in the respective ECG.
Show Device in Tree	Use this menu item to highlight the selected device in the tree structure.
Reset Device(s) to Default Values	Use this menu item to reset the device parameters to the default values. Groups and scenes are also reset.
Add Control Gear	Use this menu item to open the dialog for adding ECGs. Use the spinner to select the required number and click **[Add]** to confirm the selection.
Swap Name	Use this menu item to open another submenu in which the available ECGs are listed. Click the required ECG in the list to swap the name of the selected ECG with the name of the clicked on ECG.

Name
To change the name of an ECG, double-click in the respective table cell. The area changes into an input field in which you can enter the required name. Press the **[Return]** button on your keyboard. The subsequent table entry is selected and you can edit the entry.

Address
To enter an address for an ECG, double-click in the respective table cell. The area changes into an input field in which you can enter the required address. Press the **[Return]** button on your keyboard. The subsequent table entry is selected and you can edit the entry.

Serial Number
To enter or change the serial number of an ECG, double-click in the respective cell. The area changes into an input field in which you can enter the serial number.

Information

Table sorting
Click in the individual columns of the header to sort the table rows in ascending or descending order. A small black arrow marks the column by which the rows are currently sorted.

4.1.2.1.4 Locate

To assign an appropriate name to an existing ECG, you have to identify its installation location.

1. First, make sure that all ECGs are switched OFF by clicking the **[Central Off]** button on the ribbon.
2. Click the **[Locate Start]** button on the ribbon.
3. Click an ECG in the list to highlight it. The ECG flashes so that you can identify and assign it an appropriate name.

Note

Select the type of signaling
To use a steady light for signaling instead of a flashing light for the ECG, select the **Switch ON** checkbox on the ribbon.

4. Rename the ECG. Press the **[Return]** button on your keyboard to select and rename the subsequent list entry.
5. Go through and name the ECGs individually.
6. When done, click the **[Locate Stop]** button on the ribbon.

4.1.2.1.5 Using a Barcode Scanner to Sort ECGs

If the serial number of the ECG is available as a barcode (e.g., part of a building plan), you can use a barcode scanner to record the individual ECGs and to assign the required table row:

1. Start Random addressing.
2. If the serial number (8-byte length) of the ECG is available, click in the **Serial Number** column to select the table cell for editing.
3. Scan the serial number of the ECG to which you want to assign the first address. On the bus (and in the table cell), the address is replaced and the table cell below that is highlighted for editing.
4. Scan the required barcodes one after the other. The addresses are now sorted based on the scan order.

4.1.2.2 Sensor Types 1

4.1.2.2.1 Start Addressing

Note

Addressing involves current tab!
Addressing is always only carried out for the devices of the tab currently selected (Control Gears, Sensor Type 1, Sensor Type 2) and not for all gear types at the same time.

1. Make sure that the connection to the required DALI Multi-Master Module has been established.

2. In the selection box, choose between the “Random Addressing” and “Physical Selection” entries.

3. Click the **[Start]** button.

4. Click **[Yes]** to confirm the dialog.

The detected devices are listed under the “**Sensor Type 1**” tab.

The **tree structure** can be expanded on the left side of the configuration area. It also contains a list of detected devices.

4.1.2.2.2 Add

In the case of an offline configuration, the required sensor types can also be created manually from the context menu:

1. To assign a sensory type 1 to a DALI Multi-Master Module, first select the “**Sensor Type 1**” tab.

2. Right-click in the configuration area under the “**Sensor Type 1**” tab to display the context menu. A context menu appears.

3. In the context menu, select **Add Device**> **Add Push Button** or **Add Multi Sensor**. The respective dialog appears.

4. Enter the required number of pushbutton couplers or sensor couplers in the selection box and click **[Add]** to confirm your entry.

The required number of sensor types 1 is listed under the “**Sensor Type 1**” tab in a **table**.

The table contains the following information:
- Name
- Path
- Address (input field “Adr” within the icon)
- Serial number

The **tree structure** can be expanded in the topology tree on the left side of the configuration area. It now contains the added sensor types 1.

5. Double-click in the respective table cell to edit the “Name”, “Address” and “Serial number” entries.

4.1.2.2.3 Edit

Context menu
To edit the entries of the individual buttons/sensors, right-click the required row. A context menu appears.

Note

Multiple selections are possible!
To edit several devices at the same time, click the required entries while holding down the **[Shift]** key. Click and hold down the **[Ctrl]** key to select and deselect specific entries.

Table 16: Context menu for the “Sensor Type 1” list

Menu item	Description
Delete Device(s)	Use this menu item to delete the selected device(s) from the list.
Delete Device(s) and Address(es)	Use this menu item to delete the selected device(s) from the list. In addition, the short address is also cleared in the respective device.
Show Device in Tree	Use this menu item to highlight the selected device in the tree structure.
Reset Device(s) to Default Values	Use this menu item to reset the device parameters to the default values.
Add Device	Use this menu item to open another submenu:
	“**Add Push Button**”: Use this menu item to open the dialog for adding pushbutton couplers. Use the spinner to select the required number and click **[Add]** to confirm the selection.
	“**Add Multi Sensor**”: Use this menu item to open the dialog for adding multi-sensors. Use the spinner to select the required number and click **[Add]** to confirm the selection.
Swap name	Use this menu item to open another submenu in which the available sensors of the same type are listed. Click the required sensor in this list to replace change its name.

Name
To change the name of a button/sensor, double-click in the respective table cell. The area changes into an input field in which you can enter the required name.

Address/Adr
To enter or change an address for a sensor type 1, click in the icon in the input field.

Serial Number
To enter or change the serial number of a sensor, double-click in the respective cell. The area changes into an input field in which you can enter the serial number.

4.1.2.2.4 Locate

To assign an appropriate name to an existing device of sensor type 1, you have to identify its installation location.

1. Click the **[Locate Start]** button on the ribbon.
2. Click a device in the list to highlight it. The device emits a signal so that you can identify and assign it an appropriate name.
3. Rename the device. Press the **[Return]** button on your keyboard to select and rename the subsequent list entry.
4. Go through and name the devices individually.
5. When done, click the **[Locate Stop]** button on the ribbon.

Um einem vorhandenen Gerät vom Sensortyp 1 einen passenden Namen zuordnen zu können, müssen Sie es am Einbauort identifizieren.

4.1.2.3 Sensor Types 2

4.1.2.3.1 Start Addressing

Note

Addressing involves current tab!
Addressing is always only carried out for the devices of the tab currently selected (Control Gears, Sensor Type 1, Sensor Type 2) and not for all gear types at the same time.

1. Make sure that the connection to the required DALI Multi-Master Module has been established.
2. In the selection box, choose between the “Random Addressing” and “Physical Selection” entries.

Note

“Physical Selection” option for pushbutton couplers only
Physical addressing is only possible for sensor type 2 when no MSensors are connected!

3. Click the **[Start]** button.
4. Click **[Yes]** to confirm the dialog.

The detected devices are listed under the “**Sensor Type 2**” tab.
The **tree structure** can be expanded on the left side of the configuration area. It also contains a list of detected devices.

4.1.2.3.2 Add

In the case of an offline configuration, the required sensor types can also be created manually from the context menu:

1. To assign a sensory type 2 to a DALI Multi-Master Module, first select the "**Sensor Type 2**" tab.

2. Right-click in the configuration area under the "**Sensor Type 2**" tab to display the context menu. A context menu appears.

3. In the context menu, select **Add Device** > **Add Push Button** or **Add M-Sensor**. The respective dialog appears.

4. Enter the required number of pushbutton couplers or multi-sensors in the selection box and click **[Add]** to confirm your entry.

The required number of sensor types 2 is listed under the "**Sensor Type 2**" tab in a table.

The table contains the following information:
- Name
- Path
- Address (input field **Adr** with sensors within the icon)
- Serial Number

The **tree structure** can be expanded in the topology tree on the left side of the configuration area. It now contains the added sensor types 2.

5. Double-click in the respective table cell to edit the "Name", "Address" and "Serial Number" entries.

4.1.2.3.3 Editing

Context menu
To edit the entries of the individual pushbutton couplers/multi-sensors, right-click the required row. A context menu appears.

Note

Multiple selections are possible!
To edit several devices at the same time, click the required entries while holding down the **[Shift]** key. Click and hold down the **[Ctrl]** key to select and deselect specific entries.

Table 17: Context menu for the "Sensor Type 2" list

Menu item	Description
Delete Device(s)	Use this menu item to delete the selected device(s) from the list.
Delete Device(s) and Address(es)	Use this menu item to delete the selected device(s) from the list. In addition, the short address is also cleared in the respective device.
Show Device in Tree	Use this menu item to highlight the selected device in the tree structure.
Reset Device(s) to Default Values	Use this menu item to reset the device parameters to the default values.
Add Device	Use this menu item to open another submenu:
	"**Add Push Button**": Use this menu item to open the dialog for adding pushbutton couplers. Use the spinner to select the required number and click **[Add]** to confirm the selection.
	"**Add M-Sensor**": Use this menu item to open the dialog for adding multi-sensors. Use the spinner to select the required number and click **[Add]** to confirm the selection.
Swap Name	Use this menu item to open another submenu in which the available sensors of the same type are listed. Click the required sensor in this list to replace change its name.

Name
To change the name of a button/sensor, double-click in the respective table cell. The area changes into an input field in which you can enter the required name.

Address/Adr
To enter or change an address for a sensor type 2, double-click in the respective table cell or click in the icon in the input field.

Serial Number
To enter or change the serial number of a sensor, double-click in the respective cell. The area changes into an input field in which you can enter the serial number.

4.1.2.3.4 Locate

To assign an appropriate name to an existing device of sensor type 2, you have to identify its installation location.

1. Click the **[Locate Start]** button on the ribbon.
2. Click a device in the list to highlight it. The device emits a signal so that you can identify and assign it an appropriate name.
3. Rename the device. Press the **[Return]** button on your keyboard to select and rename the subsequent list entry.
4. Go through and name the devices individually.
5. When done, click the **[Locate Stop]** button on the ribbon.

4.1.3 Tree Structure

The ECGs and sensors are listed in a tree structure on the left side of the configuration area. The individual levels and sublevels can be expanded and collapsed using the adjacent arrow.

4.1.3.1 Selecting/Deselecting Devices

- **Select device:** To select a single device, click the device to highlight it.
- **Select multiple devices:** To select multiple devices, hold down the **[Ctrl]** key and click all required devices.
  Alternatively, you can also select successive devices by holding down the **[Shift]** key and clicking the first and last device.
- **Deselect device:** To deselect a specific device, hold down the **[Ctrl]** key and click the respective device. The selection is removed.

4.1.3.2 Context Menu

Right-click a level in the tree structure or a device in the sublevel to display the context menu for the respective selection. The following menu items are available:

Table 18: Context menu for the entries in the tree structure

Menu item	Description
Add New Section	Use this menu item to create a new area to which you can add devices by drag & drop.
Rename	Use this menu item to change the respective node into an input field in which you can enter the required name.
Reset Device(s) to Default Values	Use this menu item to reset the device parameters to the default values. For ECGs, groups and scenes are also reset.
Delete	This menu item is only enabled for areas. Use this menu item to remove the selected area from the tree structure.
Restore Device	Use this menu item to transfer he configuration settings of a specific device to a new replacement device if it has the same address as the previous one.
Copy Settings • Groups • Scenes • General Gear Settings • Device Type Specific • All	Use these menu items to copy the respective settings of the device currently selected to the cache to then transfer the settings to another device.
Paste	Use this menu item to transfer saved settings from the cache (see menu item “Copy Settings”) to the device currently selected.
Expand All	Use this menu item to expand the tree structure completely.
Collapse All	Use this menu item to collapse the tree structure completely.

4.1.3.3 Setting Up Building/Room Structure

To assign the ECGs and sensor types in a clear manner, you can create and name areas and subareas in the tree structure as required.

1. Right-click the tree structure.
2. Select the **Add New Section** submenu item.
3. Click the new tree level and select the **Rename** menu item in the context menu. The selected area changes into an input field.

4. Enter an intuitive name for the tree level, e.g., 1st Floor.
   Info: To create a sublevel (e.g., “Room 1”) for the “1st Floor” tree level, the “1st Floor” level must be selected. In contrast, to create another level of the same type (e.g., “2nd Floor”), the higher-level level must be selected.

5. Repeat these steps until you have created the required building/room structure.

Note

Edit level structure
You can drag & drop to move areas at any time to edit or correct the room structure later!

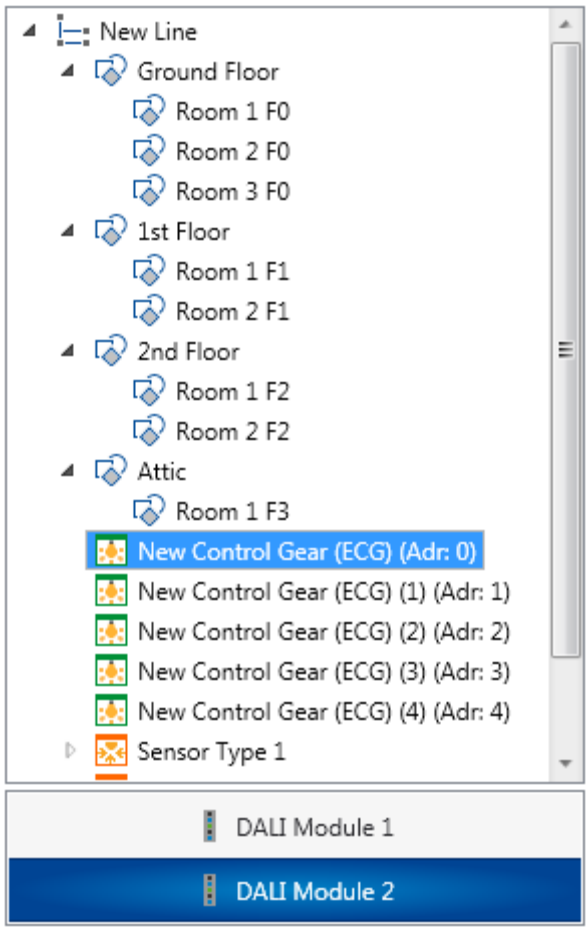


Figure 10: Setting up the tree structure

4.1.3.4 Assigning ECGs to Your “Rooms”

You can drag & drop ECGs/sensors to the required tree levels. In the “Setting up the tree structure” figure, these tree levels have been named as floors or rooms.

4.1.4 Groups & Scenes

To assign your DALI control gears groups and scenes and to set dimming values, colors or color temperatures, lick the **[Groups & Scenes]** button.

In the configuration area, there are 2 trees for “Groups” and “Scenes”.
You can drag & drop devices from the tree structure to the group tree and scene tree to assign them.

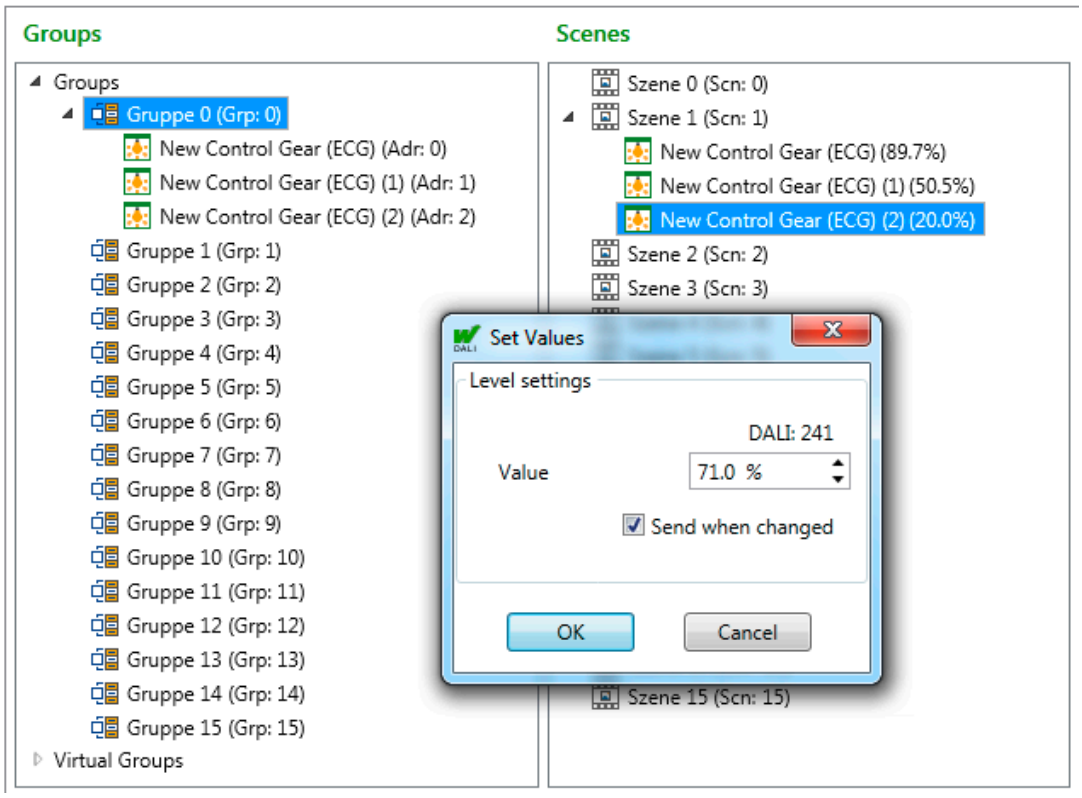


Figure 11: View of the “Groups & Scenes, Set Scene Value” configuration area (example)

4.1.4.1 Assigning Groups

If you have dragged a device to a group in the group tree, an arrow appears on the left next to the respective group tree entry. You can click on the arrow to expand the devices assigned to the respective group.

4.1.4.2 Group Context Menu

Right-click a group to display the context menu:

Table 19: “Groups” context menu

Menu item	Description
Rename	Select this menu item to change the selected group into an input field in which you can enter the required name. To exit the input field, confirm your entry by pressing the **[Return]** key on your keyboard or by clicking another group tree structure.
Remove Device(s) from Group	Use this menu item to remove attached devices from the group.

4.1.4.3 Assigning Scenes

If you drag a device or group of devices to a scene in the scene tree, the “**Set Values**” dialog appears.

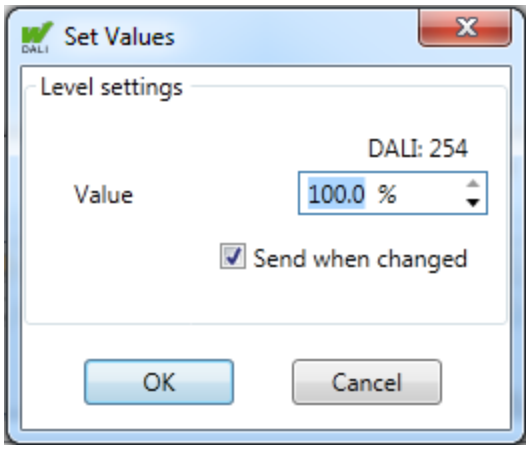


Figure 12: “Set Values” dialog (example 1)

Specify the level settings in this dialog.

1. Select a value from the spinner or enter a value.
2. Select the **Send when changed** checkbox.
3. Confirm your entries by clicking **[OK].**

The dialog closes and an arrow appears on the left next to the respective scene tree entry.

You can click on the arrow to expand the devices assigned to the respective scene. The specified dimming value of a device follows in brackets.

With some devices (type 8 control gears), you can also specify the color value and color temperature:

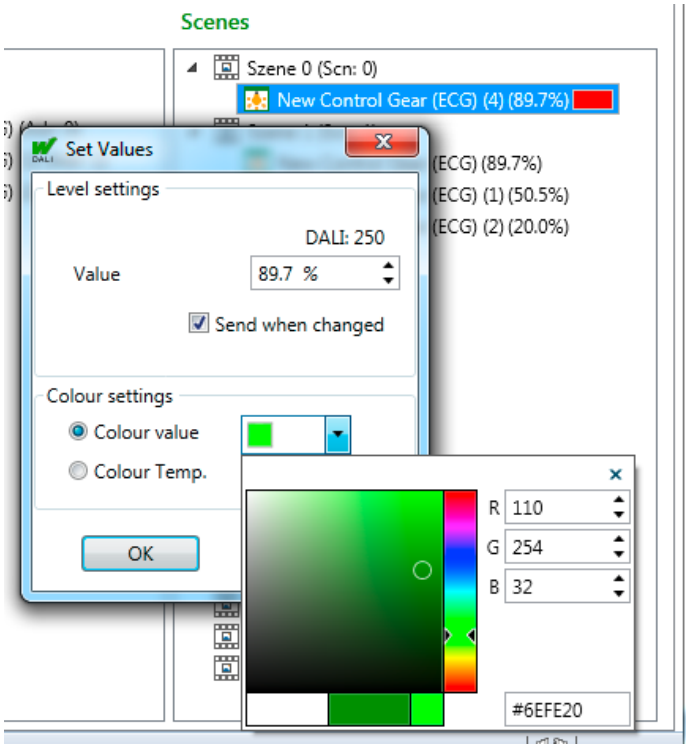


Figure 13: “Set Values” dialog (example 2)

4.1.4.4 Scene Context Menu

Right-click a scene or attached devices to display the related context menu:

Table 20: “Scene” context menu

Menu item	Description
Rename	Select this menu item to change the selected scene into an input field in which you can enter the required name (e.g., “Room 1”). To exit the input field, confirm your entry by pressing the **[Return]** key on your keyboard or by clicking another scene tree structure.
Configure Scene	Use this menu item to open the “Set Values” dialog. (See also section “Assigning Scenes”.)
Remove Device(s) from Scene	Use this menu item to remove attached devices from the scene.
Recall Scene	Only enabled if a connection is established and exactly 1 scene is selected. Use this menu item to call up the selected scene (broadcast).

4.1.5 Configuration

To read or write the configuration parameters from DALI network devices, click the **[Configuration]** button.

Additional tabs are available to you in the configuration area.

The tabs displayed depend on which gear types are in the selection of the topology tree (tree structure).

If the top level (default name “New Line”) of the tree structure is selected, corresponding tabs are created for each underlying gear type.

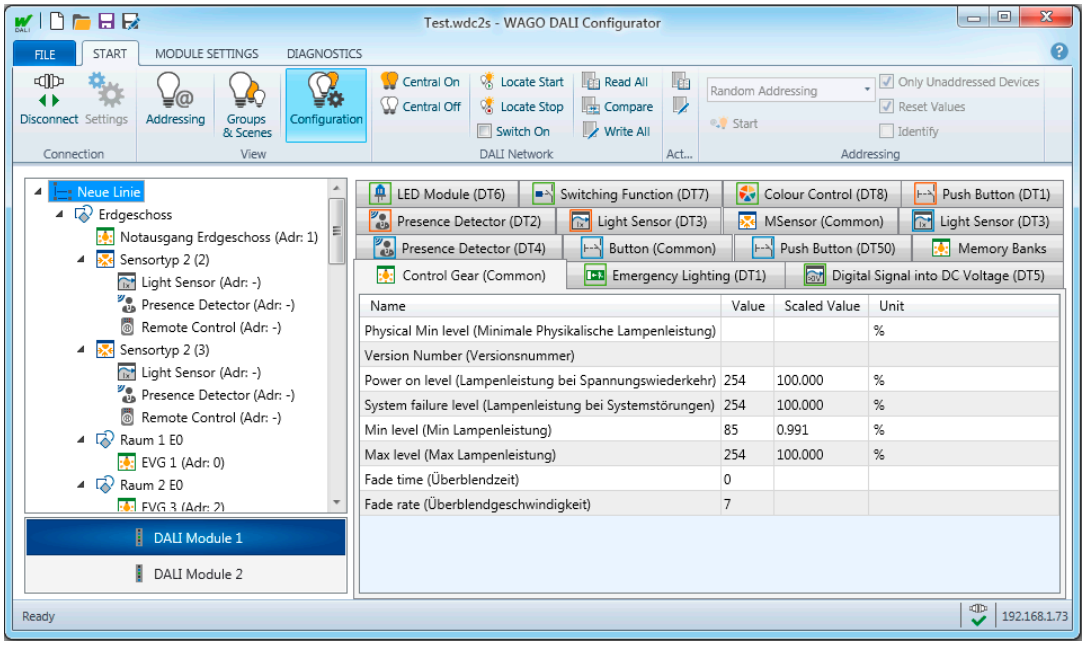


Figure 14: “Configuration” view (example)

4.1.5.1 “Control Gear (Common)” Tab

You have access to the following parameters in the table under the “**Control Gear (Common)**” tab:

Table 21: “Control Gear (Common)” tab

Name	Description	Unit	Read/Write
Physical Min level	Minimum physical lamp output	Percent [%]	R
Version Number	Version number		R
Power on level	Lamp output with voltage recovery	Percent [%]	R/W
System failure level	Lamp output in the event of system malfunction (e.g., interrupted DALI line)	Percent [%]	R/W
Min level	Minimum lamp output	Percent [%]	R/W
Max level	Maximum lamp output	Percent [%]	R/W
Fade time	Fade time (time for the dimming value change)		R/W
Fade rate	Fade speed		R/W

4.1.5.2 “Emergency Lighting (DT1)” Tab

You have access to the following parameters in the table under the “**Emergency Lighting (DT1)**” tab:

Table 22: “Emergency Lighting (DT1)” tab

Name	Description	Unit	Read/Write
Emergency Min Level	Minimum lamp output for emergency lighting: Minimum brightness level to operate the light in emergency mode. The value can lie between “1” and “Emergency Max Level”.	Percent [%]	R
Emergency Max Level	Maximum lamp output for emergency lighting: Maximum brightness level to operate the light in emergency mode. The value can lie between “Emergency Min Level” and “254”.	Percent [%]	R
Rated Duration	Duration test interval: Duration that the lamp can be operated in emergency mode (e.g., based on the battery charge). The value can lie between 0 and 255. The value is multiplied by 2 min.		R
Features	Functions: Information about type and functionality of the ECG.		R
Extended Version Number	Extended version number		R
Emergency Level	Lamp output for emergency lighting: Brightness value to operate the lamp in emergency mode. The value must lie between “Emergency Min Level” and “Emergency Max Level”.	Percent [%]	R/W
Function test delay time	Function test delay: Maximum period within which the function test is started again when it could not be started previously at the scheduled time, e.g., due to a low batter charge.	Hours [h]	R/W
Function test interval	Function test interval: Time after which a function test is carried out again.	Days [days]	R/W

Table 22: “Emergency Lighting (DT1)” tab

Name	Description	Unit	Read/Write
Duration test delay time	Duration test delay: Maximum period within which the light duration test is started again when it could not be started previously at the scheduled time.	Hours [h]	R/W
Duration test interval	Duration test interval: Time after which a light duration test is carried out again.	Weeks [weeks]	R/W
Test execution timeout	Maximum execution time: Indicates when a test could not be performed even after the delay time.	Days [days]	R/W
Prolong time	Emergency mode shutoff delay: Period during which the light remains at the emergency level after returning to normal mode.	Minutes [min]	R/W

4.1.5.3 “Digital Signal into DC Voltage (DT5)” Tab

You have access to the following parameters in the table under the “Digital Signal into DC Voltage (DT5)” tab:

Table 23: “Digital Signal into DC Voltage (DT5)” tab

Name	Description
Converter Features	Converter functions: Information about type and functionality of the ECG
Extended Version Number	Extended version number

4.1.5.4 “LED Module (DT6)” Tab

You can view and set some of the following parameters in the table under the “**LED Module (DT6)”** tab:

Table 24: “LED Module (DT6)” tab

Name	Description	Unit	Read/Write
Min Fast Fade Time	Min. fast fade time: The value can lie between 0 … 27. The value is multiplied by 25 ms.	Milli-seconds [ms]	R
Gear Type	Gear type: Information about type and functionality of the ECG.		R
Possible Operating Modes	Possible operating modes		R
Features	Features: Information about the functionality of the ECG.		R
Extended Version Number	Extended version number		R
Fast Fade Time	Fast fade time: The value can lie between 0 … 27. The value is multiplied by 25 ms.	Milli-seconds [ms]	R/W
Dimming Curve	Dimming curve: The response indicates what dimming curve is currently used: • “0” means standard logarithmic dimming curve • “1” means linear dimming curve		R/W

4.1.5.5 “Switching Function (DT7)” Tab

You have access to the following parameters in the table under the “**Switching Function (DT7)**” tab:

Table 25: “Switching Function (DT7)” tab

Name	Description	Unit	Read/Write
Gear Type	Gear type: Information about type and functionality of the ECG		R
Features	Features: Information about the functionality of the ECG.		R
Extended Version Number	Extended version number		R
Up Switch On Threshold	Switch ON threshold switch up	Percent [%]	R/W

Table 25: “Switching Function (DT7)” tab

Name	Description	Unit	Read/Write
Up Switch Off Threshold	Switch OFF threshold switch up	Percent [%]	R/W
Down Switch On Threshold	Switch ON threshold switch down	Percent [%]	R/W
Down Switch Off Threshold	Switch OFF threshold switch down	Percent [%]	R/W
Error Hold Off Time	Error hold time: Minimum time that there must be an error, so that it is displayed: • “0” means the error is immediately displayed • “255” means the error is not displayed	Seconds [s]	R/W

4.1.5.6 “Colour Control (DT8)” Tab

You can specify the color settings of a device under the “**Colour Control (DT8)**” tab:

Table 26: “Colour Control (DT8)” tab

Name	Description	Unit	Read/Write
xy-Coordinate Capable	Supports xy coordinates		R
Colour Temperature Capable	Supports color temperature		R
Extended Version Number	Extended version number		R
Automatic activation	Automatic activation		R/W
Color value and color temperature:			
Power On Colour	Color after voltage recovery	Color [Color]	R/W
System Failure Colour	Color in the event of system malfunctions	Color [Color]	R/W

Table 26: “Colour Control (DT8)” tab

Name	Description	Unit	Read/Write
Color temperature:			
Colour Temperature Tc Physical Coolest	Physically coolest color temperature Tc	Color [Color]	R/W
Colour Temperature Tc Physical Warmest	Physically warmest color temperature Tc	Color [Color]	R/W
Colour Temperature Tc Coolest	Coolest color temperature Tc	Color [Color]	R/W
Colour Temperature Tc Warmest	Warmest color temperature Tc	Color [Color]	R/W

Click the **Scaled Value** table column to open the “**Set Values**” dialog where you can set the **Colour value** or **Colour Temp**. (color temperature). Click the **[OK]** button to confirm your entries.

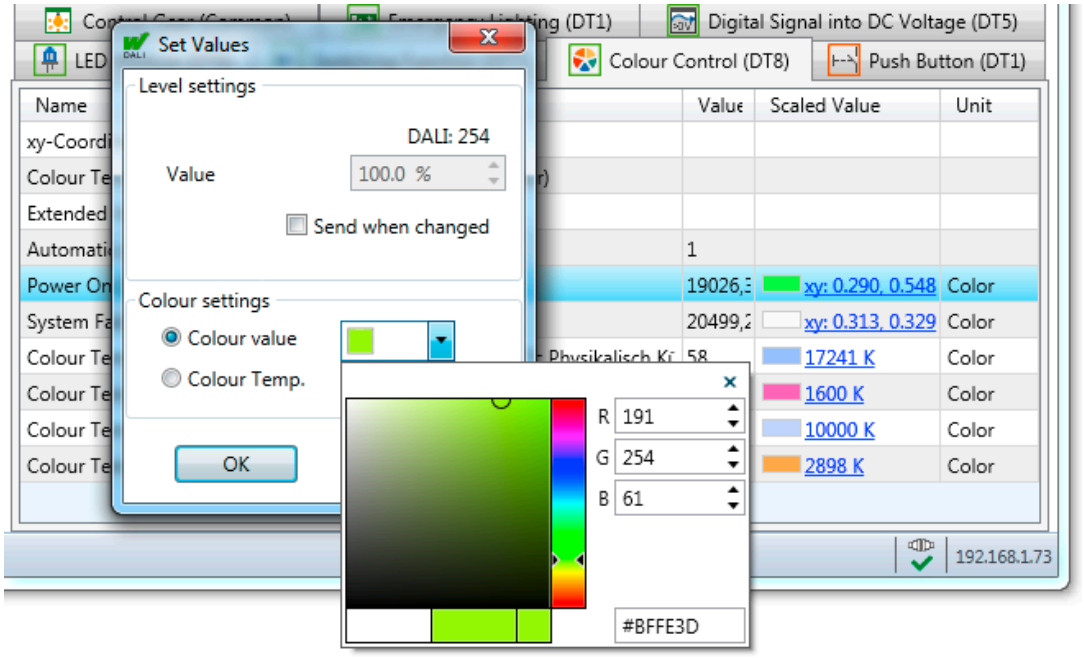


Figure 15: Change color settings – color value

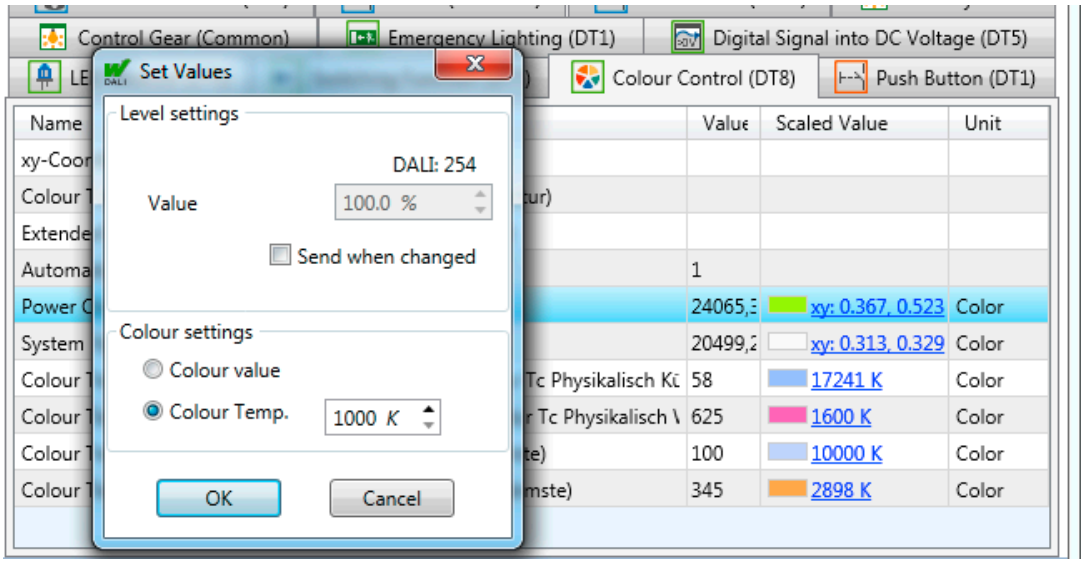


Figure 16: Change color settings – color temperature

4.1.5.7 "Memory Banks" Tab

The "Memory Banks" tab pertains to ECGs.

Note

Read memory banks for a selected device
The memory banks for a selected device must be read before they can be displayed! Click the **[Read]** button on the ribbon.

Note

Observe the manufacturer's documentation!
The specific description for memory banks of individual ECGs is available in the manufacturer's documentation of the respective ECG.

4.1.5.7.1 Multiple Devices

If multiple devices are selected, you can write 1 individual byte in the respective memory bank in all selected devices.

1. First, select the required value from the **Write value** list box.
2. Select the address concerned from the **to address** list box.
3. Select the required memory bank from the **on memory bank** list box.
4. Click the **[Write]** button on the ribbon to confirm your selection.

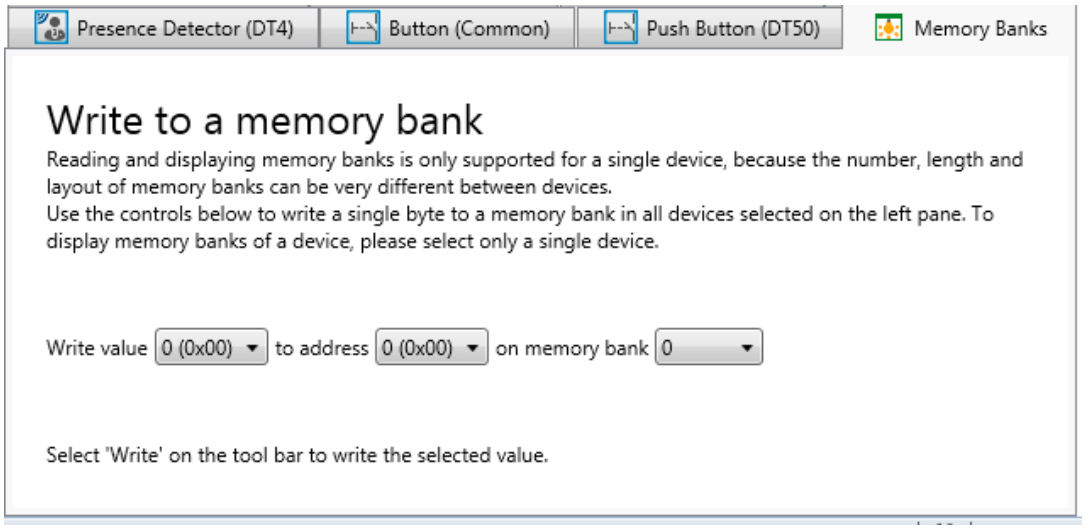

Presence Detector (DT4)
Button (Common)
Push Button (DT50)
Memory Banks
Write to a memory bank
Reading and displaying memory banks is only supported for a single device, because the number, length and layout of memory banks can be very different between devices.
Use the controls below to write a single byte to a memory bank in all devices selected on the left pane. To display memory banks of a device, please select only a single device.
Write value 0 (0x00) to address 0 (0x00) on memory bank 0
Select 'Write' on the tool bar to write the selected value.

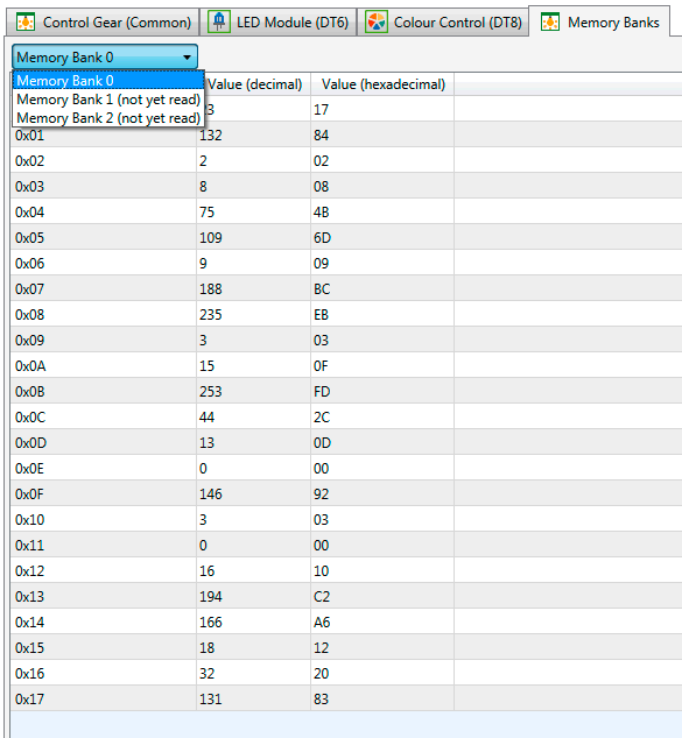
Figure 17: Write memory bank, multiple devices (example)

Note

The “Lock byte” is not written automatically!
A memory bank is initially “read only”. The “Lock byte” is used to (un)lock write access. The “Lock byte” must be written before write access to the memory bank is allowed!

4.1.5.7.2 Single Device

If a single device is selected, multiple bytes can also be written to the memory bank:



	Value (decimal)	Value (hexadecimal)
	3	17
0x01	132	84
0x02	2	02
0x03	8	08
0x04	75	4B
0x05	109	6D
0x06	9	09
0x07	188	BC
0x08	235	EB
0x09	3	03
0x0A	15	0F
0x0B	253	FD
0x0C	44	2C
0x0D	13	0D
0x0E	0	00
0x0F	146	92
0x10	3	03
0x11	0	00
0x12	16	10
0x13	194	C2
0x14	166	A6
0x15	18	12
0x16	32	20
0x17	131	83

Figure 18: Write memory bank, single device (example)

4.1.5.8 “Push Button (DT1)” Tab

You have access to the following parameters in the table under the “**Push Button (DT1)**“ tab:

Table 27: “Push Button (DT1)” tab

Name	Description	Read/Write
Sensor Active	Sensor active	R/W
Short Press	Short button press	R/W
Long Press	Long button press	R/W
Double Press	Double button press	R/W
Switch	Switch	R/W

4.1.5.9 “Presence Detector (DT2)” Tab

You have access to the following parameters in the table under the “**Presence Detector (DT2)**” tab:

Table 28: “Presence Detector (DT2)” tab

Name	Description	Unit	Read/Write
Sensor Active	Sensor active		R/W
Repetition Time	Repetition time	Seconds [s]	R/W

4.1.5.10 “Light Sensor (DT3)” Tab

You have access to the following parameters in the table under the “**Light Sensor (DT3)**” tab:

Table 29: “Light Sensor (DT3)” tab – sensor type 1

Name	Description	Unit	Read/Write
Sensor Active	Sensor active		R/W
Send On Delta	Send on change in value: Send on change in the brightness value.	Percent [%]	R/W
Min Send Time	Minimum send time: Minimum time until updating the brightness value.	Seconds [s]	R/W
Max Send Time	Maximum send time: Maximum time until updating the brightness value.	Seconds [s]	R/W

Table 30: “Light Sensor (DT3)” tab – sensor type 2

Name	Description	Unit	Read/Write
Send On Delta	Send on change in value: Send on change in the brightness value.	Percent [%]	R/W
Min Send Time	Minimum send time: Minimum time until updating the brightness value.	Seconds [s]	R/W
Max Send Time	Maximum send time: Maximum time until updating the brightness value.	Seconds [s]	R/W

4.1.5.11 “Presence Detector (DT4)” Tab

You have access to the following parameters in the table under the “**Presence Detector (DT4)**” tab:

Table 31: “Presence Detector (DT4)” tab

Name	Description	Unit	Read/Write
Sensor Active	Sensor active		R/W
Repetition Time	Repetition time	Seconds [s]	R/W

4.1.5.12 “MSensor (Common)” Tab

You have access to the following parameters in the table under the “**MSensor (Common)**” tab:

Table 32: “MSensor (Common)” tab

Name	Description	Read/Write
Sensor Active	Sensor active	R/W

4.1.5.13 “Button (Common)” Tab

You can view the following parameters in the table under the “**Button (Common)**” tab:

Table 33: “Button (Common)” tab

Name	Description	Read/Write
Sensor Active	Sensor active	R/W

4.1.5.14 “Push Button (DT50)” Tab

You have access to the following parameters in the table under the “**Push Button (DT50)**” tab:

Table 34: “Push Button (DT50)” tab

Name	Description	Read/Write
Switch	Put into operation as a switch	R/W
On Short Press	Short button press ON	R/W
Off Short Press	Short button press OFF	R/W
On Long Press	Long button press ON	R/W
Off Long Press	Long button press OFF	R/W
Double Press	Double button press	R/W
Switch Closed	Switch closed	R/W
Switch Opened	Switch opened	R/W

4.2 “MODULE SETTINGS” Tab

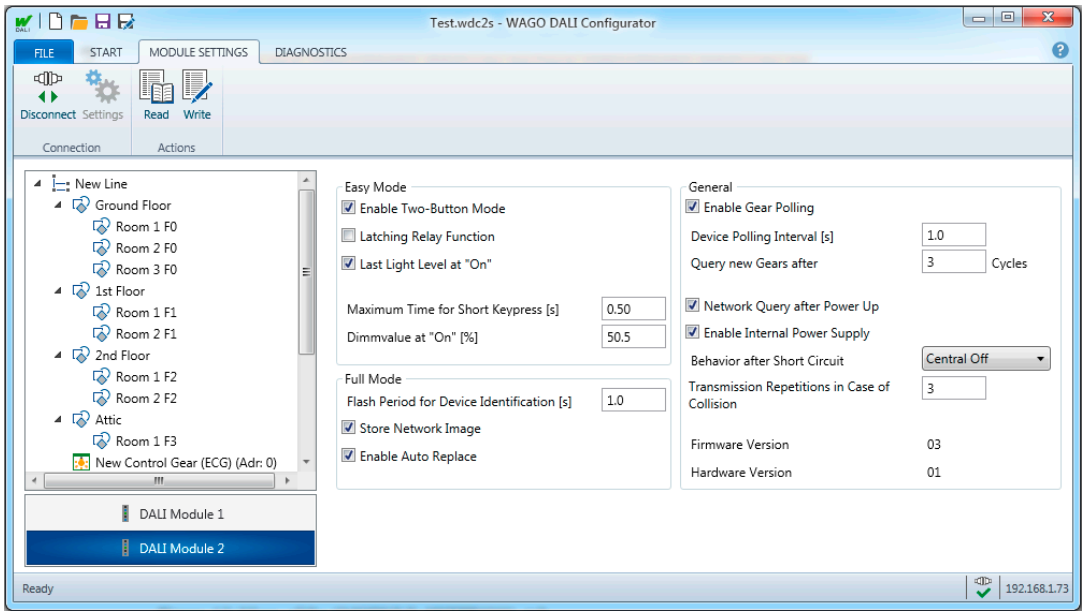


Figure 19: View of the “MODULE SETTINGS” tab

The view of the configuration of the I/O module is on the “**MODULE SETTINGS**” tab. You can perform general settings for the DALI Multi-Master Module 753-647.

The view is divided into 3 areas:

- Easy Mode
- Full Mode
- General

You can press the **[Read]** button on the ribbon to display the settings of the current DALI Multi-Master Module.

You can also make changes to the settings and then write the changes to the DALI Multi-Master Module by clicking the **[Write]** button on the ribbon.

Table 35: Buttons of the “MODULE SETTINGS” tab

Button	Label	Beschreibung
Connection		
	[Connect]	(only visible if not connected) Establishes the connection to the DALI Multi-Master Module.
	[Disconnect]	(only visible if connected) Disables the connection to the DALI Multi-Master Module.
	[Settings]	Click this button to open the “Communication Settings” dialog, see section “START Tab” > … > “Communication Settings”.
Actions		
	[Read]	Use this button to read the settings of the DALI Multi-Master Module.
	[Write]	Use this button to write the settings made on this tab to the DALI Multi-Master Module.

4.2.1 Overview of Configuration Settings

4.2.1.1 “Easy Mode”

The “Easy mode” provides lighting control using simply binary signals without complicated PLC programming.

Table 36: Overview of the “Easy mode” configuration settings

Function	Ex. value	Description
Enable Two-Button Mode	☑*	2-button mode enabled *
	☐	1-button mode enabled
Latching Relay Function	☑	Latching relay function enabled (dimming is blocked)
	☐*	Latching relay function disabled *
Last Light Level at “On”	☑*	Save the last dimming value when switching OFF as the starting value for switching ON *
	☐	Switch ON at fixed dimming value (default 229 corresponds to 50.7%)
Maximum Time for Short Keypress[es]	0.50 [s]	Time, up to which a button press is recognized as a short button signal
Dimmvalue at “On” [%]	50.5	Setting at what brightness value should be switched ON.

* Default

4.2.1.2 “Full Mode”

In “Full mode”, the I/O module can query and control the status of the attached devices in the DALI line by systematic polling.

Table 37: Overview of the “Full mode” configuration settings

Function	Ex. value	Description
Flash Period for Device Identification [s]	1.0 [s]	Flashing period for locating the devices
Store Network Image	☑*	Store network settings every 24 hours from RAM to EEPROM enabled *
	☐	Store network settings every 24 hours from RAM to EEPROM disabled
Enable Auto Replace	☑*	Automatic replace of replacement devices enabled *
	☐	Automatic replace of replacement devices disabled

* Default

4.2.1.3 General Settings

Table 38: Overview of the “General” configuration settings

Function	Ex. value	Description
Enable Gear Polling	☑*	Gear polling enabled *
	☐	Gear polling disabled
Device Polling Interval[s]	1.0 [s]	Interval for device polling (1 ... x sec.)
Query new Gears after … Cycles	3	Number of gear query cycles after which the network must be queried for new gears (x ... y cycles)
Network Query after Power UP	☑*	Network query after restart enabled *
	☐	Network query after restart disabled
Enable Internal Power Supply	☑*	Internal power supply enabled *
	☐	Internal power supply disabled

Table 38: Overview of the “General” configuration settings

Function	Ex. value	Description
Behavior after Short Circuit	Behavior of the DALI Multi-Master Module after the end of a short circuit:	
	No action	DALI Multi-Master Module performs no separate action.
	Central OFF *	If the short circuit lasted between 3 seconds … 7 seconds, the DALI Multi-Master Module switches OFF all ECGs (see also "Construction Site Function").
	Last dim-ming value	All lights are set to the dimming value before occurrence of the short circuit. **Info**: Only enabled in firmware 4 or higher
Transmission Repetitions in Case of Collision	3	Number of transmissions/repetitions in case of error

* Default

Table 39: Overview of configuration setting information

Information		
Firmware Version	03	Displays the firmware version of the selected DALI Multi-Master Module.
Hardware Version	01	Displays the hardware version of the selected DALI Multi-Master Module.

Use the “Enable Internal Power Supply” function to disable the internal DALI power supply in the DALI Multi-Master Module 753-647 to connect an external DALI power supply.

NOTICE

Destruction of DALI subscribers due to misuse of the WAGO power supply 787-1007!
Please note that the power supply by WAGO (Item No.: 787-1007) may only be connected to the DALI Multi-Master Module 753-647. The power supply for the DALI bus is provided indirectly via the DALI Multi-Master Module. A direction connect to the DALI bus can result in the destruction of the attached DALI slaves. Therefore, never connect the WAGO Power Supply 787-1007 to a DALI network directly without a DALI Multi-Master Module 753-647 connected between the power supply and the network.

4.2.2 Using the “Construction Site Function”

Use of the **Behavior after Short Circuit** function can also be helpful before initial startup, e.g., to switch OFF the lighting at a construction site overnight:

1. Make sure that the “Central Off” function is selected (default setting) in the **Behavior after Short Circuit** selection box.

2. Switch a button between the two DALI bus lines to short-circuit the DALI bus.

3. Make sure that the “**Lamp Output on System Failure” (System failure level) for the ECGs** lies between 1 and 254 (default setting: 254, i.e., 100 %).

4. Perform a short circuit within a time window of 3 … 7 seconds.

The “OFF” command is sent as a broadcast and all ECGs and lighting is switched OFF simultaneously.

4.3 “DIAGNOSTICS” Tab

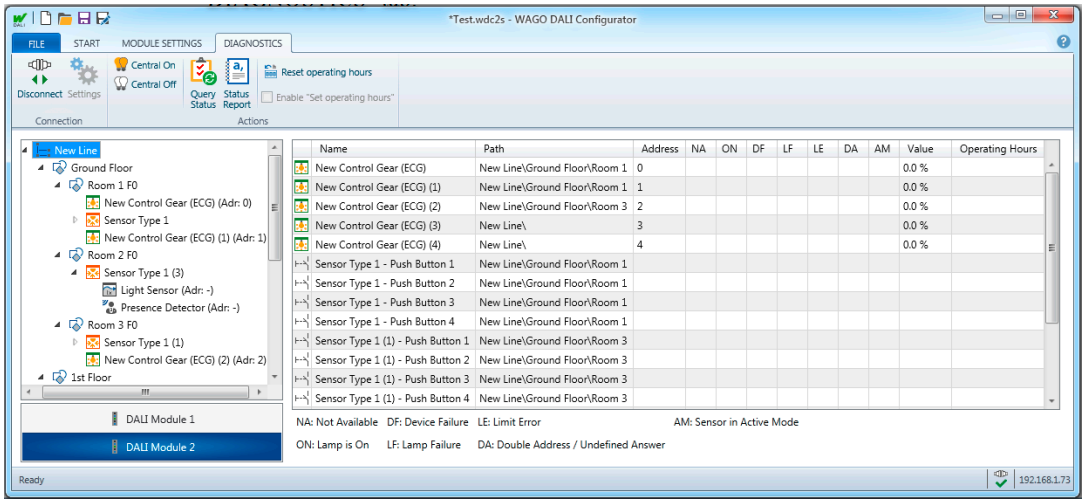

*Test.wdc2s - WAGO DALI Configurator
FILE
START
MODULE SETTINGS
DIAGNOSTICS
Disconnect
Settings
Connection
Central On
Central Off
Query Status
Status Report
Reset operating hours
Enable "Set operating hours"
Actions
New Line
Ground Floor
Room 1 F0
New Control Gear (ECG) (Adr: 0)
Sensor Type 1
New Control Gear (ECG) (1) (Adr: 1)
Room 2 F0
Sensor Type 1 (3)
Light Sensor (Adr: -)
Presence Detector (Adr: -)
Room 3 F0
Sensor Type 1 (1)
New Control Gear (ECG) (2) (Adr: 2)
1st Floor
DALI Module 1
DALI Module 2
Name
Path
Address
NA
ON
DF
LF
LE
DA
AM
Value
Operating Hours
New Control Gear (ECG) New Line\Ground Floor\Room 1 0 0.0 %
New Control Gear (ECG) (1) New Line\Ground Floor\Room 1 1 0.0 %
New Control Gear (ECG) (2) New Line\Ground Floor\Room 3 2 0.0 %
New Control Gear (ECG) (3) New Line\ 3 0.0 %
New Control Gear (ECG) (4) New Line\ 4 0.0 %
Sensor Type 1 - Push Button 1 New Line\Ground Floor\Room 1
Sensor Type 1 - Push Button 2 New Line\Ground Floor\Room 1
Sensor Type 1 - Push Button 3 New Line\Ground Floor\Room 1
Sensor Type 1 - Push Button 4 New Line\Ground Floor\Room 1
Sensor Type 1 (1) - Push Button 1 New Line\Ground Floor\Room 3
Sensor Type 1 (1) - Push Button 2 New Line\Ground Floor\Room 3
Sensor Type 1 (1) - Push Button 3 New Line\Ground Floor\Room 3
Sensor Type 1 (1) - Push Button 4 New Line\Ground Floor\Room 3
NA: Not Available DF: Device Failure LE: Limit Error AM: Sensor in Active Mode
ON: Lamp is On LF: Lamp Failure DA: Double Address / Undefined Answer
Ready
192.168.1.73

Figure 20: View of the “DIAGNOSTICS” tab

The diagnostic view of the DALI Multi-Master Module 753-647 is on the “DIAGNOSTICS” tab.

Table 40: Buttons of the “DIAGNOSTICS” tab – Connection

Button	Label	Description
	Connection	
	[Connect]	(only visible if not connected) Establishes the connection to the DALI Multi-Master Module.
	[Disconnect]	(only visible if connected) Disables the connection to the DALI Multi-Master Module.
	[Settings]	Click this button to open the “Communication Settings” dialog, see section “START Tab” > … > “Communication Settings”.

Table 41: Buttons of the “DIAGNOSTICS” tab– Actions

Button	Label	Description
Connection		
	[Central ON]	Click this button to switch ON all lights connected to the DALI line.
	[Central OFF]	Click this button to switch OFF all lights connected to the DALI line.
	[Status Query]	Click this button to update the diagnostic information, operating values and operating hours.
	[Status Report]	Click this button to create a diagnostic report that you can open later as e.g., an Excel file. The content is a snapshot of the current status of all connected DALI slaves. The “**Save As**” dialog appears. Enter the required storage location and file name of the CSV file and click the **[Save]** button to confirm.
	[Reset Operating Hours]	Click this button to reset the operating hours of the selected devices to the value “0”.
☐* / ☑	**[Enable "Set Operating Hours"]**	Select this checkbox to allow editing of table cells for writing the operating hours. (This function is only available in firmware version 4 or higher, i.e., the checkbox is grayed out otherwise).

* Default

Note

Operating hours are written to the I/O module internal database, not to the ECG!

The set operating hours are written to the internal database of the DALI Multi-Master Module 753-647 and not to the respective ECG itself!

In addition to the columns with icon, name, path, address, value and operating hours, the table in the configuration area also contains the following columns in which the status of a device is indicated in the respective table row:

- NA: **N**ot **a**vailable
- ON: Light is **ON**
- DF: **D**evice **f**ault
- LD: **L**ights **d**efective
- LE: **L**imit **e**rror
- DA: **D**uplicate **a**ddress detected / undefined response
- AM: Sensor in **ac**tive **m**ode

Any errors are indicated by a red exclamation mark:

Note

Move table columns!
If the later columns (Value, Operating Hours) of the table in the configuration area are not visible due to the screen being too small, it makes sense to push the earlier table columns (Name, Path) together.

Table 42: Meaning of the status indication in the diagnostic table

Status	Explanation	Remedy
NA	Device not available	Check the device, connection and addressing. If required, re-assign the address (see section “START Tab” > … > “Addressing”).
ON	The lamp is switched ON	---
DF	Device fault or device failure	Check the failed device. Replace the device if defective. If necessary, use the Replace function to transfer data (topology tree context menu, menu item **Restore Device**) (see section “START Tab” > … > “Tree Structure”).
LD	Lamp is defective	Replace the defective lamp.
LE	Underrun or overrun of the limiting value	Check the limit settings for the device concerned in the configuration (see section “START Tab” > … > “Configuration”).
DA	Duplicate address detected or Undefined response	To remove a duplicate address, switch to the Addressing view under the “START” tab. Delete the address of the device concerned from the table cell. Then re-assign the address (see section “START Tab” > … > “Addressing”).
AM	Sensor is in active mode and is transmitting data	---

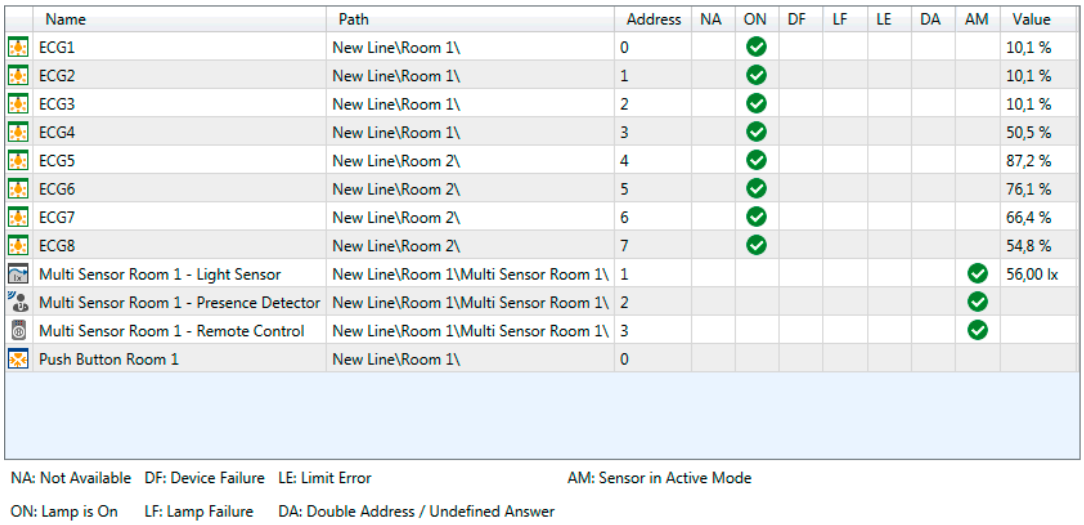
4.3.1 Updating Diagnostic Information

In the tree structure on the left side, choose for which of your DALI Multi-Master Module 753-647 you want to display the list of all connected devices. Multiple selection is possible.

1. Select the required DALI Multi-Master Module 753-647 by clicking it.

2. Click the **[Status Query]** button on the ribbon.

All attached control gears with their respective status are listed for the DALI Multi-Master Module 753-647 currently selected in the table on the right side.



Name	Path	Address	NA	ON	DF	LF	LE	DA	AM	Value
ECG1	New Line\Room 1\	0		✓						10,1 %
ECG2	New Line\Room 1\	1		✓						10,1 %
ECG3	New Line\Room 1\	2		✓						10,1 %
ECG4	New Line\Room 1\	3		✓						50,5 %
ECG5	New Line\Room 2\	4		✓						87,2 %
ECG6	New Line\Room 2\	5		✓						76,1 %
ECG7	New Line\Room 2\	6		✓						66,4 %
ECG8	New Line\Room 2\	7		✓						54,8 %
Multi Sensor Room 1 - Light Sensor	New Line\Room 1\Multi Sensor Room 1\	1							✓	56,00 lx
Multi Sensor Room 1 - Presence Detector	New Line\Room 1\Multi Sensor Room 1\	2							✓	
Multi Sensor Room 1 - Remote Control	New Line\Room 1\Multi Sensor Room 1\	3							✓	
Push Button Room 1	New Line\Room 1\	0								

NA: Not Available DF: Device Failure LE: Limit Error AM: Sensor in Active Mode
ON: Lamp is On LF: Lamp Failure DA: Double Address / Undefined Answer

Figure 21: View of the configuration area under the “DIAGNOSTICS” tab

4.3.2 Creating a Status Report

You have the option of creating a diagnostic report of the connected DALI network devices as a CSV file:

1. Click the **[Status Report]** button on the ribbon. The “**Save as**” dialog appears.
2. Enter the required storage location and file name for the CSV file.
3. Click **[Save]** to confirm the dialog.

The file created can now be opened, e.g. as an Excel table.

4.3.3 Light Operating Hours

Note

Move table columns!
If the later columns (Value, Operating Hours) of the table in the configuration area are not visible due to the screen being too small, it makes sense to push the earlier table columns (Name, Path) together.

4.3.3.1 Reset Operating Hours

The operating hours counted in the last table column **Operating Hours** can be reset to “0”.

1. Click to select the device whose operating hours you want to reset.

2. Click the **[Reset operating hours]** button on the ribbon.

4.3.3.2 Set Operating Hours

Note

Logging operating hours depending on firmware!
You can only edit the table cells for DALI Multi-Master Modules with firmware version 4 or higher and only then if the function has been unlocked by selecting the **Set Operating Hours** checkbox.
For I/O modules with a firmware version lower than 4, the function is disabled and the respective checkbox grayed out.

Note

A short address is required to write operating hours!
To write operating hours, enter the required value in the respective table cell of the "**DIAGNOSTICS**" tab. The respective device must have a short address. An error message appears otherwise.

For DALI Multi-Master Modules with firmware 4 or higher, you can write operating hours, e.g. for applications where an ECG is replaced, but the lighting is continued to be used.

1. Make sure that the respective device has a short address.

2. Select the **Enable 'Set operating hours'** checkbox on the ribbon. The table cells are unlocked.

3. You can now edit the table cell entry

4.4 Status Bar

Figure 22: Status bar (example)

Information on the status of the started action appears if necessary in the status bar at the bottom of the user interface.

The connection status to a DALI Multi-Master Module is represented on the right by an icon:

Table 43: Connection status to the DALI Multi-Master Module

Symbol	Description
	The DALI Multi-Master Module is connected.
	There is no connection to a DALI Multi-Master Module.

In addition, the current connection settings are displayed, i.e., the IP address or COM port of the connected fieldbus node if necessary.

If an action (e.g., Read, Write, etc.) is called up, a progress bar displays the progress of the action.

If an error occurs, it is indicated by an icon and textually named.

4.5 “File” Tab

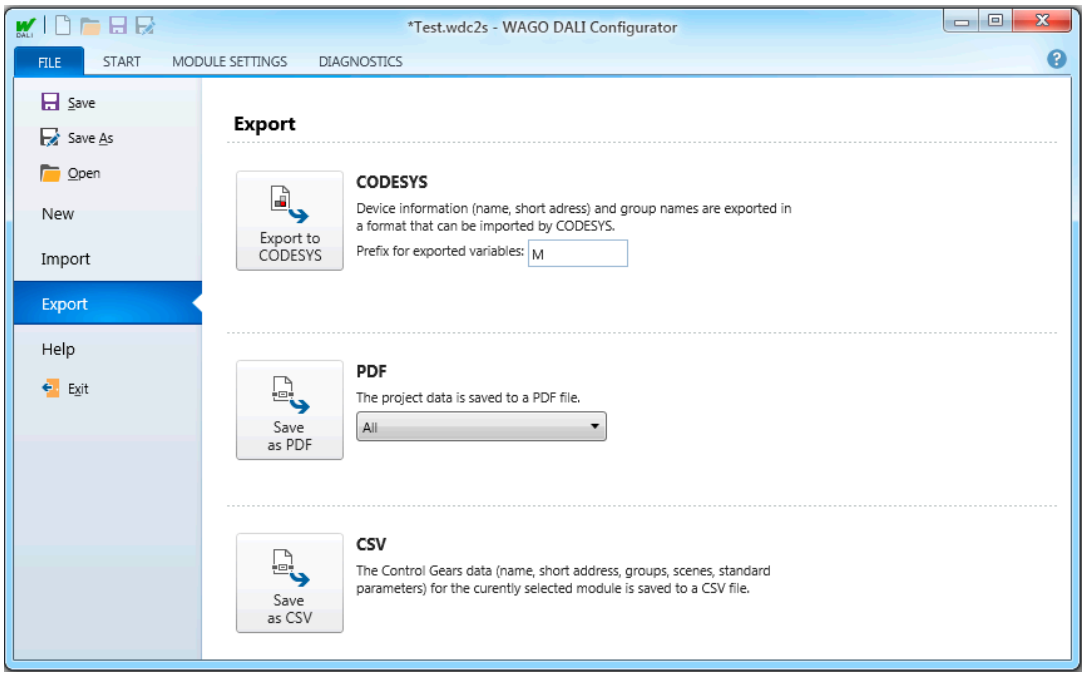


Figure 23: View of the “FILE” tab

For some buttons, there is a Backstage view on the “**FILE**” tab, as known from MS Office among others.

With the buttons listed here, you have the option to:

- Save a project
- Save the project under a different name
- Open an existing project
- Create a new project or project folder
- Import project data (XML or CSV)
- Export device information to a format importable by CODESYS
- Save the project data to a PDF file
- Export the project data to a CSV file
- Call up the user manual as a PDF
- Display WAGO contact information
- Close the program

Table 44: Buttons of the “FILE” tab

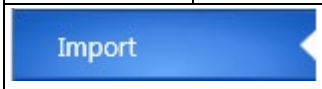
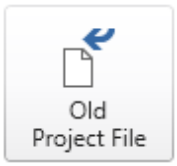
Button	Label	Description
	[Save]	The configuration of the current project is saved as a project folder. File format: “wdc2s” (“WAGO DALI Configurator 2 Solution”). **Note:** For a new project, select the required storage location in your directory structure, assign a file name and click **[Save]** to confirm.
	[Save As]	Select the required storage location in your directory structure and the required file name for the .wdc2s file of the current project. Click **[Save]** to confirm.
	[Open]	Select the required .wdc2s file in your directory structure and click **[Open]** to confirm.
		This button displays a Backstage view with other buttons for creating a new project or project folder.
	[New Project]	Click this button to create a new empty project for the selected DALI Multi-Master Module. The project data of the other modules remains unchanged. After creating a new project, the program switches to the **START** tab.
	[New Solution]	Click this button to create a new solution. The solution contains the project data of all DALI Multi-Master Modules. After creating a new solution, the program switches to the **START** tab.
		This button displays a Backstage view with other buttons for importing old project files (XML format) or project data (CSV format) of the selected DALI Multi-Master Module.
	**[Old Project File]**	Click this button to open an old project file (from WAGO DALI Configurator version 1). The project data for the selected DALI Multi-Master Module is replaced by this project.
	[Import CSV File]	CSV Click this button to import control gears from a CSV file and add them to the project data of the selected DALI Multi-Master Module.
		This button displays a Backstage view with other buttons for exporting your project data.
	[Export to CODESYS]	Click this button to export device information (name, short address) and the group names of the DALI Multi-Master Modules in a format that can be imported by CODESYS.

Table 44: Buttons of the “FILE” tab

Button	Label	Description
	[Save as PDF]	Click this button to create the project documentation for your project or your project folder as a PDF file. Use the selection box to choose between “All” (default) or “Selected Module”.
	[Save as CSV]	Click this button to export the project data for the selected DALI Multi-Master Module (name, short address, groups, scenes and standard parameters) to a CSV file (ECGs only).
		this button displays a Backstage view with the WAGO contact address and contact information for WAGO Support. In addition, you can also open the software manual from a button.
	[PDF manual]	Opens the manual for the WAGO DALI Configurator (PDF).
	[Exit]	Terminates execution of the program and closes the window.

4.5.1 Project Documentation: Create “WAGO DALI Configurator Report”

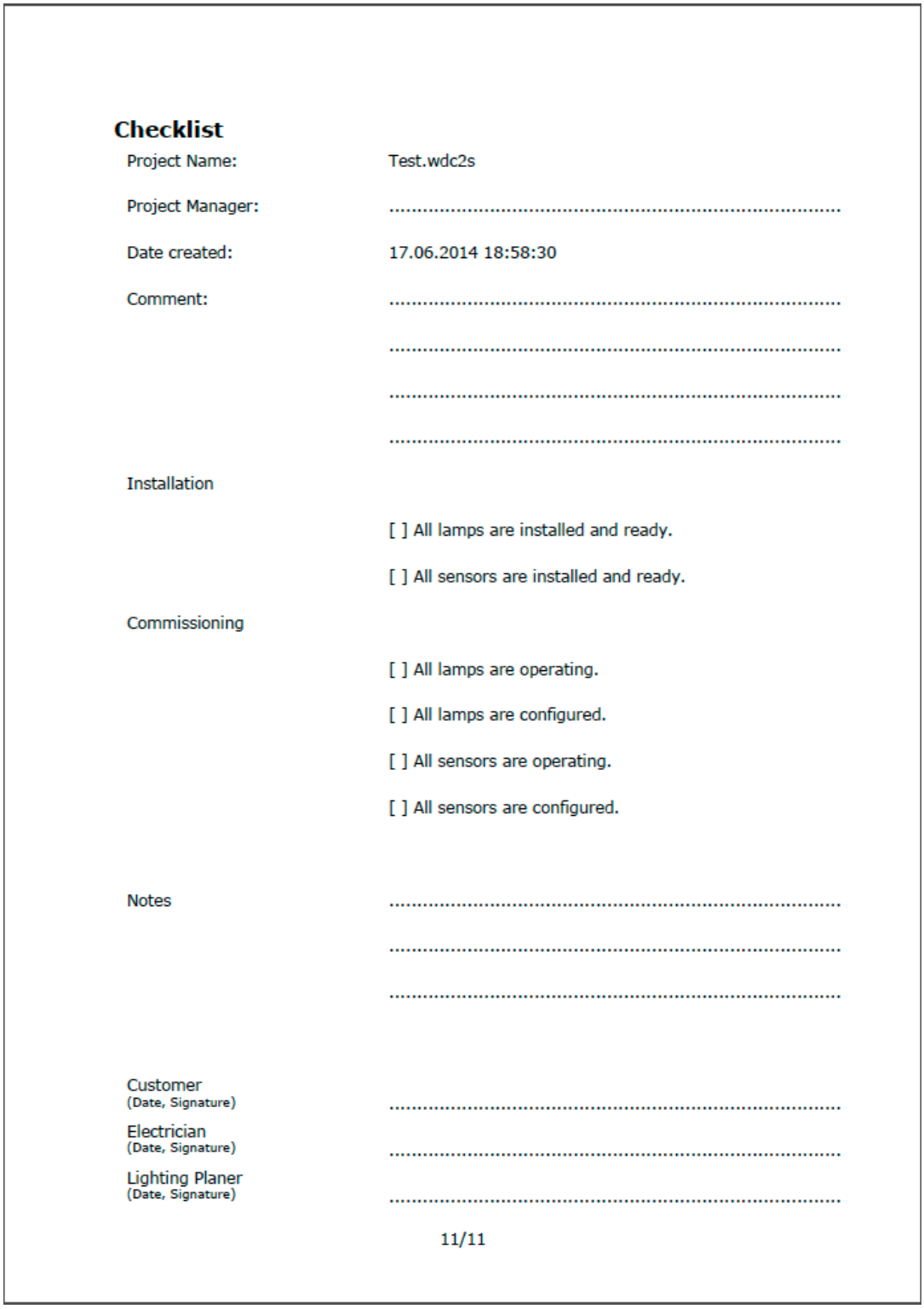
The **[Save as PDF]** button is available to you in the Backstage view of the **[Export]** button.

Click this button to create a report for your project or project folder in the form of a PDF file.

In addition to the project name and creation date, the comprehensive device overview with group association, scene values and device settings is listed.

In addition, a checklist for installation and startup is generated in which the project manager is named and comments can be entered. Customer, electrician and lighting designer can countersign the report (see figure “Report, Checklist”).

1. Click the **[Export]** button. The related Backstage view is shown.
2. In the **PDF** area, select if the report for the current project (“Selected module”) or the entire project folder with all attached DALI Multi-Master Modules (“All”) should be created.
3. Click the **[Save as PDF]**. The “**Save Report**” dialog opens.
4. Enter the required storage location and file name of the PDF file and click the **[Save]** button to confirm. The PDF is generated.



Checklist

Project Name: Test.wdc2s

Project Manager: .....

Date created: 17.06.2014 18:58:30

Comment: .....

.....

.....

.....

Installation

[ ] All lamps are installed and ready.

[ ] All sensors are installed and ready.

Commissioning

[ ] All lamps are operating.

[ ] All lamps are configured.

[ ] All sensors are operating.

[ ] All sensors are configured.

Notes .....

.....

.....

Customer (Date, Signature) .....

Electrician (Date, Signature) .....

Lighting Planer (Date, Signature) .....

11/11

Figure 24: Report, Checklist

5 Startup – Example Configuration

5.1 Establish Connection

1. Launch the WAGO DALI Configurator. You are at the beginning on the "**START**" tab.
2. Click the [**Settings**] button on the ribbon. The "**Communication Settings**" dialog appears.
3. Select the **Connection** ("Ethernet (TCP/IP)" or "Serial").
4. Enter the **IP Address** or select the **Port**.
5. Select the appropriate **DALI Module position**.
6. Confirm your entries by clicking **[OK]**.
7. Click the [**Connect**] button on the ribbon.

5.2 Address Control Gears (ECG)

1. Make sure that the **[Addressing]** button on the ribbon is active and that you are on the "**Control Gears**" tab.
2. If necessary, clear the **Only Unaddressed Devices** checkbox on the ribbon.
3. Select the "Random Addressing" entry in the ribbon selection box.
4. Click the **[Start]** button on the ribbon. A dialog appears with the questions "Would you like to start addressing with the following settings?"
5. Click **[Yes]** to confirm the dialog. The control gears found are listed.
6. Click the **[Locate Start]** button on the ribbon.
7. Double-click the first table cell and rename the control gear as required. Press the **[Return]** key on your keyboard to confirm your entry. The next table cell is selected for editing.
8. Also rename the other control gears.
9. Click the **[Locate Stop]** button on the ribbon to stop the process.

5.3 Create Room Structure

1. Right-click the **New Line** tree structure.
2. Select the **Add New Section** menu item in the context menu.
3. Right-click the new **New Section** entry.

4. Select the **Rename** menu item in the context menu.
5. Enter a suitable name, e.g., “Room 1”.
6. Repeat steps 1 to 5 until you have created the required number of areas.
7. Distribute the control gears to the areas as required by dragging & dropping each control gear to the respective area.

5.4 Assigning Lighting Groups

1. Click the **[Groups & Scenes]** button on the ribbon.
2. Drag a required section from the room structure to a group of the group tree in the configuration area.
3. Right-click the respective group.
4. Select the **Rename** menu item in the context menu.
5. Enter a suitable name, e.g., “Room 1”.
6. Do the same with the remaining areas.

5.5 Assigning a Light Scene

1. Drag a required group from the list of “**Groups**” to a scene of the scene tree. The “**Set Values**” dialog appears.
2. Enter a value for the level setting (%).
3. Select the **Send when changed** checkbox.
4. Confirm your entries by clicking **[OK]**.
5. Expand the edited scene by clicking the arrow next to the scene. The same dimming value is specified for all control gears in the scene.
6. To edit the level setting of individual control gears, right-click the control gear and select **Configure Scene** menu item in the context menu. The “**Set Values**” dialog opens, but this time for the currently selected control gear only.
7. Change the dimming value of the individual control gear as required.
8. Right-click the scene and select the **Rename** menu item in the context menu to rename the scene, e.g. to “Projector” or “Presentation”.

5.6 Configuring Control Gears (ECG)

1. Click the **[Configuration]** button on the ribbon.
2. First make sure that the required section is selected in the tree structure. Edit the table entries in the "**Control Gear (Common)**" tab.
3. Click the **[Write]** button in the ribbon to apply the changes made to the DALI Multi-Master Module.

5.7 Addressing and Assigning Type 2 Sensors

1. Click the **[Addressing]** button on the ribbon.
2. Select the "**Sensor Type 2**" tab.
3. Click the **[Start]** button on the ribbon. A dialog appears with the questions "Would you like to start addressing with the following settings?"
4. Click **[Yes]** to confirm the dialog. The control gears found are listed.
5. Double-click in the first table row and name the type 2 sensor as required.
6. You can also rename the remaining type 2 sensors.
7. Click the **[Locate Start]** button on the ribbon.
8. Click the **[Locate Stop]** button on the ribbon to stop the process.
9. The type 2 sensors are also listed in the tree structure. Distribute the type 2 sensors in the areas as required.

5.8 Configuring Type 2 Sensors

1. Click the **[Configuration]** button on the ribbon.
2. First make sure that the required sensor/coupler is selected in the tree structure. Edit the table entries under the corresponding tabs.
3. Click the **[Write]** button in the ribbon to apply the changes made to the DALI Multi-Master Module.

5.9 Querying the Control Gear Status

1. Go to the "**DIAGNOSTICS**" tab.
2. Click the **[Query Status]** button on the ribbon. All attached control gears with their respective status are listed for the DALI Multi-Master Module currently selected in the table on the right side.

3. To create a snapshot of the current status as a CSV file, click the **[Status Report]** button on the ribbon.
   The "**Save as**" dialog appears.

4. Enter the required storage location and file name for the CSV file.

5. Click **[Save]** to confirm the dialog.

The file created can now be opened externally, e.g. as an Excel table.

5.10 Generating Project Documentation

1. Go to the "**FILE**" tab.

2. Click the [**Export**] button. The related Backstage view is shown.

3. In the PDF area, select if the report for the current project ("Selected Module") or the entire project folder with all attached DALI Multi-Master Modules ("All") should be created.

4. Click the **[Save as PDF]** button. The "**Save report**" dialog appears.

5. Enter the required storage location and file name of the PDF file and click the **[Save]** button to confirm. The PDF is generated.

5.11 Setting Cyclic Control Gear Query and Saving the Project

1. Go to the "**MODULE SETTINGS**" tab.

2. Select the **Enable Gear Polling** checkbox.

3. Change the value in the **Device Polling Interval [s]** input field as required.

4. Click the **[Write]** button on the ribbon.

5. Click the icon in the quick access toolbar to save the configuration.
   The "**Save configuration**" dialog appears.

6. Enter a file name and click **[Save]** to confirm your entry.

6 Glossary

A

Auto-Replace Function

In the event that exactly one control gear item (ECG) is defective and is replaced by a non-addressed ECG, the “Replace” function can be used to automatically assign the old short address of the previous control gear to the new control gear and subsequently restore the settings for that control gear using the data stored in the module database.

C

Control Gear (electronic ballast, ECG)

“Control Gear” is the short designation for “electronic control gear” (ECG). In DALI networks, control gear is implemented as one or more components between the network power supply and one or more lamps.
The control gear is used for power supply for the lighting and for communication with DALI. The control gears provide the switch-on voltage and warm-up current for the lamps to prevent a cold start, thus enhancing the power factor and reducing electromagnetic interference.

Control Device

“Control Device” is the IEC designation for the DALI-(Multi)-Master. This term also denotes the active sensors.

D

DALI

“DALI” is the acronym for “Digital Addressable Lighting Interface”, a protocol for control of lighting devices and equipment in building automation, such as switched-mode power supply units (“electronic transformers”), electronic control gear (ECG) or electronic dimmers. Specific definitions are elucidated in the IEC 62386 series of standards.
→ *Refer also to “IEC 62386”.*

DALI Short Address

Each device with a DALI interface is addressed in the network using a DALI short address. For some multifunction devices, such as the multisensors, each individual function (brightness, presence, remote control) can be assigned a dedicated DALI short address, enabling the function to be specifically addressed.

E

Easy mode

In the “Easy” mode, attached DALI devices are represented in binary form with two bits each on the process image. These two bits correspond to the button functions (ON/OFF, DIMMING) and are implemented in the DALI Multi-Master Module 753-647. The status is queried in cycles.
The “Easy mode” is implemented by modules in the firmware.

→ *See also “Full mode.”*

F

Full mode

In the “Full” mode, switching commands are specified by a higher-order control system via a PLC application.
The transmission within the I/O module occurs via the I/O module internal mailbox. Querying of process data is acyclic.
The “Full mode” is implemented by modules in WAGO-I/O-*PRO*.

→ *See also “Easy mode.”*

I

IEC 62386

The “IEC 62386” “Digitally addressable interface for lighting” is a series of standards which defines details specific to DALI. This series of standards is reviewed by the IEC subcommittee SC 34C and consists of different sections (date, Sept. 2010):

- 101: System,
- 102: Operating Devices,
- 201 to -210: Device Types 0-9:
  - 201: Device Type 0: Fluorescent Lamps
  - 202: Device Type 1: Independent Emergency Lighting
  - 203: Device Type 2: Discharge Lamps
  - 204: Device Type 3: Low-Voltage Halogen Lamps,
  - 205: Device Type 4: Incandescent Lamps
  - 206: Device Type 5: Conversion of Digital Signals to DC Voltage
  - 207: Device Type 6: LED Modules
  - 208: Device Type 7: Switching Function
  - 209: Device Type 8: Color/Color Temperature Control
  - 210[*)]: Device Type 9: Sequencers

([*)] Device Type 9 is not supported by the WAGO DALI Multi-Master Module 753-647).

M

Multi-Master

In a “Multi-Master”, control of the intelligent measuring and automation devices on the fieldbus is performed locally, in contrast to a Master-Slave system.
The WAGO 753-647 DALI Multi-Master Module is a Multi-Master, which supports the DALI interface and can utilize this interface together with other master devices.

R

Random Address

The “Random address” (or “Search Address”) is a 24-bit address generated by an ECG during initialization.

S

Single Master

In contrast to a Multi-Master, a “Single Master” does not support collision detection and is not suitable for connection at the same interface with other masters.

Settling Time

The “Settling Time” is the minimum time period between two frames.

V

Virtual Group

A DALI group is a logical combination of devices to which a common group address is assigned so that these devices execute a common function synchronously. These devices do not necessarily have to be physically linked (e.g., the group for all emergency lighting systems, all hallway lights, etc.).
In the event that the 16 group addresses available for this (0 ... 15) are not sufficient, as further groups are required, an additional 16 virtual groups (with group addresses 17 .... 31) can also be created. These groups cannot, however, be addressed via a DALI group command, but only one after the other by individual commands from the DALI Multi-Master Module. A maximum of 8 devices may be assigned to each virtual group in order not slow down or impede DALI data exchange on the bus.

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